THE LOOKOUTMAN

DAVID W. BONE

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Signed on board the Ship or Vessel called the Transylvania, whereof is Master,

David Wm Bone.

At sea
June 30: 1926.

Charles and Clara Nienaber made a cruise on the Transylvania with Captain Bone leaving New York Jan 25. 1928.

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The Lookoutman

By the same Author.

THE BRASSBOUNDER

"BROKEN STOWAGE"

MERCHANTMEN-AT-ARMS, with illustrations by Muirhead Bone

The Lookoutman

By
David W. Bone

Illustrated by
H. Hudson Rodmell

New York
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To
THE BOY SCOUT BUGLERS ON THE
BURGH GREEN AT RENFREW,
WHO SOUNDED A GENERAL SALUTE TO
"COLUMBIA"
AS SHE CAME IN FROM SEA

338381

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I.

Introduction

"*. . . In the nayme of God Glorious and Allemyghty, hee that wil passe ouer the See to goe to the Citye of Jerusalem, hee maye goe by manye Weyes, bothe on See and Lande, aftre the Contre that hee cometh fro: manye of hem comen to an ende. But troweth not that I wil telle you alle . . . that men schaslle goe by, for then scholde I mak to longe a tale.*"—Sir John Mandeville, his Travels.

SIR JOHN voyaged in 1322. If the few rude barks of his time (and the Townes and Cityees and Castells of the route to Jerusalem) demanded a tale of such length that it dismayed the heart of this stout old traveller, what can one say of the ships "that men goe by" to-day, when fifty thousand tons floating on one keel is not uncommon —when more vessels than there were in Sir John's whole world turn in and out of a busy estuary in the flood and ebb of but a tide or two? Perhaps all that can be attempted in one volume may be termed a contribution, sectional in character as it must be, to the sum of an almost inexhaustible subject. Further, to reduce even that section to manageable limits, the tale of the ships must be narrowed to that of average vessels in this book of modern steamship types. To venture upon more minute details of the many variations in such types would be trespassing on the ground of the naval architect's textbook, an interesting domain it is true, but one which I am only competent to survey from beyond the fence—much in the way that the extravagant Sir John set down his impressions. I am only concerned to present a view of ships and seafaring as seen from the deep-water viewpoint of a man on lookout.

This viewpoint, the attitude of the sailor towards the ship, is sufficiently peculiar to call for comment. To him, a seaworthy vessel is quite unlike any other structure fashioned by man. He sees her as a sentient creature with a decided personality; a spirited rover of wide seas, possessing qualities no less resourceful and adventurous than his own; a creature to be humoured and admired (or perhaps forced and cursed) as her tricks and moods and tempers become revealed to him. For this belief, the circumstances of her birth are sufficient warrant.

Introduction

Conceived in the studious and creative mind of her designer, erected in patient exactitude by her builders, trimmed and riveted and fashioned into a complete and wonderful whole by the skill and craftsmanship of her artisans, she comes to her sea world with sponsors and guarantors enough. Surely, some intangible essence, some spirit of all these labours at her birth—the conceptive thought, skilled direction, the sweat and strain of toiling hammermen—must pass into her shapely hull as it grows upon the stocks. And when, at length, she is named and launched, and floats upon the river reach—a noble vessel, powerful, buoyant, inspired by the stir and circumstance of her baptism—the cheering shipyard workers must feel that a part of themselves goes out abroad with this wonderful product of their hands. It is this conception of personality and character in a ship that the sailor accepts. He may call her brute or lover, he may beat and drive her or handle her with tender care, but she is never a senseless machine to him. The reader is entreated to tolerate this simple faith.

The purpose of the book is to familiarize the reader with the outward appearance of representative types of vessels so that they may be recognized on occasion, and to offer a lookoutman's comments on their character and habits and tempers.

It is not a record of individual ships. While, in most instances, the artist has used a particular ship to illustrate the characteristics of the class to which she belongs, it should be understood that this is done because she is a good example of her type, and her selection from a group of many equally worthy vessels is determined by her build and not by her performance. Readers who feel aggrieved at the omission of favourite ships may be consoled by this explanation.

In order to give a good general idea of the size of the different vessels—in comparison of types—a much more direct method than a table of figures is needed. A difference in length (and corresponding breadth) of twenty-five feet may, in many cases, mean as much as four thousand tons! The plan is here adopted of presenting a comparison in size and contour directly to the eye. To this end a division has been made at a point in gross measurement of five thousand tons. An average of the length (and height above the water-line) of representative steamships having been obtained, the artist has drawn the selected vessel in silhouette. The scale for the vessels of over five thousand tons is 200 feet = 1 inch, and the block of the silhouette has been graved in *horizontal* lines: the scale for vessels of less than five thousand tons is 100 feet = 1 inch, and the block has been graved in *vertical* lines.

Tonnage, so frequently referred to in the book as an estimate of size, is often misleading. A "ton" as a unit of measurement may be used in many ways—net, gross, displacement, under-deck, and deadweight. Of all these, the "gross" ton is probably the most easily understood, and, throughout the book, it is this measurement that is written of. It is the total cubic capacity of a ship expressed in "tons" of one hundred cubic feet. If we could conceive a squared vessel of twenty feet length, ten feet breadth, five feet depth, it would measure one thousand cubic feet. That would be ten gross tons in ship measurement. This example is purposely crude; to go further into the matter would only obscure a simple statement.

The distinctive types of merchant steamships cannot be classified with the same precision as naval vessels. The line of subdivision is often vague and arbitrary. The chain of kinship that links the great passenger liner to the "intermediate" vessel of her class, the intermediate to the "cargo liner," the cargo liner to the "tramp," and on—through many grades—to the coaster and the tug, is strong enough to cause even a practised seaman to pause on a decision. Proportions, that on land would be apparent at once, lose their value at sea. So nearly does the shipbuilder preserve his "lines," so closely does he keep to the accepted ideal of a shapely vessel, that a difference in size of fifteen thousand tons—in itself the tonnage of a great ship—cannot always be remarked on the ocean. *Aquitania* (45,647 tons) and *Mauretania* (30,704 tons) look much alike on a distant horizon. Quite lately, I overheard a discussion on the deck of a ship at sea. A large liner was passing east and close to, providing a fine mid-ocean spectacle for the passengers. Some one hazarded a remark as to her size and tonnage. Opinions varied, but the naïve comment of a charming lady seemed to settle the matter. "That ship *must* be smaller than ours," she said. "Why, she has only two funnels, while we have three!" . . . She was but eight thousand tons in error—almost the size of our three-funnelled liner!

In a book of this character, it is inevitable that sea terms, difficult of explanation in the text, must frequently occur. While I have striven to write an explanatory context, I must admit the result a little short of satisfaction in this particular. I realize that—to many readers—a technical word or phrase is raped of its value if there is not at hand some plain assistant in the form of footnotes or a glossary. The former might serve, but they would tend to irritate a certain class of reader (happily numerous) that is already familiar with sea talk. Then again, I would have the mortifying experience of seeing a certain atmosphere which I wish to keep with me vanish before such constantly recurring squalls of explanation. It is not easy to serve all. A brief but sufficient glossary is provided at the end of the book: in that position, it cannot offend those readers who know something of ships and sailors by an ungenerous estimate of their understanding.

* * * * *

When I was a young seaman in sailing ships (learning a trade that has since had to be learned anew), it was considered a test in the craft to fashion neat jobs in ropework. Splicing, worming, parcelling, and serving—all of these being operations concerned with the fitting and setting up of the rigging—were ruled by an age-old standard that forbade any departure from the accepted methods, but in the weaving of sennit and other admired (if unnecessary) embellishment of small work in cordage, a greater latitude was allowed. Without being deemed lubberly, one could exercise what ingenuity one possessed in the cunning twist and interlacing of ropeyarns that made up our ornamental trifles.

On one occasion, I settled to make a famous pair of shackles (ropework handles) for my sea chest. They were to be very special ones: of round and square sennit and diamond hitchin', with flemish ends, and all set off with double and single turk's-heads. (Oh, that glossary! I shall have to rewrite it! Let me hasten to explain that all these fanciful terms are but the "purl and plain" of our sea-knitting and crotchet work.) After many weeks of effort, one of the shackles was finished, but when it was bent to the bow shape of the handle—alas! so loosely had I woven it, the outside of the curve showed gaps that no tar or paint would cover. My old mentor in things sailorlike was concerned at my distress. I am convinced that on any other matter he would have had a comforting assurance ready for utterance, but this was an affair of seamanship—of "sailorizing," and there could be no glossing over the defects of my lubberly work. The best he could say of it was in reference to my time employed. "A good job ye didn't make the two on 'em when ye started," he said, turning the thing over in his great hands.

He turned the misshapen object over in his great sailor hands, then, straightening it out, called to me suddenly—"Here, young fella' me lad, you take one end adrift an' ye'll have enough t' make a decent rose knot out o' it. . . . Blow me if it won't make a n'ansum bell-lanyard f'r th' old bell!"

A bell-lanyard it became, and for many years was grasped by the lookoutman when he struck the bells and called "*Aw—ll's well!*"

The point of all this is that the book was originally planned for boys. As it progressed, I found that my boys were growing up at a most alarming rate. I would begin a chapter and address my youth of ten or twelve, but before I had gone far I realized that I was writing for my contemporaries: in later paragraphs, I was indeed arguing a point with old sailors! I am concerned at this, for I know boys and youngsters generally as the most enthusiastic admirers of our ships. Wherever the navigable channels wind close inshore or pass near the river banks we seamen look for a friendly gesture from the beach. We are rarely disappointed; but while elders content themselves with a wave of the hand for salutation, it is the children who stir and beckon and show an unrestrained joy at our coming. Such a running for posts of vantage, loud calls to the laggards in the race, whistling, cheers in piping treble, hails, shrill cries of welcome! "Ship a-hoy!" they shout, "where are ye fro-o-om?"

Perhaps that kindly inquiry is but indifferently answered in the following pages, but an effort is made in them to tell of our ships and our business and sea-life. Those who read may be able to recognize us when next our wash laps the river bank at their feet and we pass in to harbour or steer seaward on a voyage.

DAVID W. BONE.

The Lookoutman

Chapter 1: *"Getting under Way"*

WHEN the anchor is off the ground and the ship begins a voyage one of the first orders is "a hand aloft to the lookout." In many modern steamships there is now no "aloft," but the word may be taken to mean a post of vantage from which a clear view can be had of all that lies ahead of the ship; the lookoutman (now that submarines are off the seas) has nothing to do with what may come up in sight astern. It is his business to report everything he sees ahead or abeam of the ship. There are no other duties. He becomes the eyes and figure-head of the vessel.

In a ship that is fitted with a "crow's nest" aloft (a not too modern ship, for the latest of these have no masts but barber's poles), it is a fine post to be sent to when the "blue peter" is hauled down and she heads out to sea. While others less fortunate are busy on the deck below, the lookoutman is free to enjoy the sights of the channel, only slamming a bell from time to time to let the officer of the watch know that another ship has come in sight. The winding reaches of the river with the busy tide-load passing up and down may keep him in quick employment, but in the estuary there is less traffic to report, and, as he has eyes to see, he cannot but let them rove over a prospect that is enhanced by his altitude. The horizon stands high to his view, and the changeful pattern of the intervening stretch of sea (that on deck would appear flat and toneless) is spread before him. At first, the muddy outpour of the river, churned by the passage of the ships, clouds the surface in whorls and patches. Then grey-green shafts and eddies appear, the inset of a tidal influence that soon overcomes the suspended river sediment and refines the channel waters. Further down a deeper and more brilliant tone comes over the sea. In this translucent blue, the fan-wise ridges of the bow wave cut out and abroad and feather on the distant shore. But on grey days when the sea-line is misty and obscured, the lookoutman aloft is confused in his survey of the opaque curtain that is spread in front of him. There is nothing but the bow of the ship below him and the thrash of the sundered ocean. He has no means of judging on what bearing an object may suddenly appear. Be he ever so alert, he does not immediately recognize in a mere smudge, apparently suspended in mid-air, the outline of a ship under way. In such weather, he is better placed on the forecastle deck forward, where a level gaze into the mist ahead is less susceptible to an illusion.

But, wherever one may be stationed, the recognition of ships and the estimation of their distance is not a simple matter. There are many things to be considered. The most important point is the visibility under varying conditions of atmosphere. On land, the effect of the prevailing weather on the appearance of the landscape is plain. During fine days, the hills and other eminences stand out in a clearly cut and distinct outline that causes them to appear much nearer than on days when mist dims their masses and detail is obscured. Strangely, the reverse is almost always the rule when the gaze is turned seaward. This difference is very marked when one is afloat and there is no land in sight. Certainly, the horizon (being the only standard by which one can judge distance at sea) seems near or far as the day may be clear or misty, but objects on that unmeasured expanse of ocean quickly lose their relation to the standard mark as the weather thickens and the horizon draws in toward the observer. On clear days, distant ships appear to be much farther off than is really the case, while rain or mist causes them to seem nearer. Fog, by blotting out all sense of proportion, makes an approaching vessel loom up huge, portentous, and somewhat unreal.

The " orator " in Hyde Park who argues the flat earth to wondering nursemaids would have his difficulties at sea, but he might make something substantial by debating the accepted phrase, "the *roundness* of the earth's surface." This might be more correctly described as the curvature of the sea. If all the heights on land were suddenly levelled to the plane of the oceans, landsmen would be astonished to learn how very limited their view would become. They would realize in what manner our prospect at sea is bounded by a horizon that, even under the most brilliant conditions, limits our vision in proportion to our stature. A man of average height, say five feet six inches, could not see a light placed on the ground at a distance of over two and a half miles! The "limitless ocean" is only a figure of speech. In the days of sailing ships, a strange sail on the horizon was always closely remarked. She would come up over the rim, showing as no more than a mere pin-point on the sharply cut sea-line. With the topsails in plain sight from our deck she would be about ten miles off, and, as one clambered aloft for a better conning, the lower courses and the hull would soon appear. But now, in modern steamships, we keep lookout from great altitudes. The navigation bridge of a liner may be eighty feet above the water-line and, from this height, an approaching vessel's top-works may be seen in clear weather at a distance of perhaps twenty miles.

On the open sea, where vessels rarely pass on other than parallel courses, the broadside outline of a ship offers a ready aid to recognition. Boldly outlined, the arrangement of the decks and position and colours of masts and funnels are quickly made out. But in the river or close to the land, a keen eye is required to disentangle the features of the ship from the lines of the shore. Ships appear to borrow a colouring from the near landscape when the light is behind them. This is particularly noticeable when there is a "greying" in the atmosphere. However boldly the ship may be painted, her outline (being broken up by deck-works and superstructures) is easily lost in the mosaic of an indefinite background. Even in the comparatively open waters of the Mersey, I have often been at a loss to pick out the colours of the ships correctly. Red may appear as rust-colour, white as blue, black as an iron-grey, while the lines of masts and spars and funnels are sometimes merged into the features of the waterside—cranes and factory chimneys, shipyard stagings, a distant spire, and the terracing of angled streets.

At a closer view, when the confusing vista of the waterside has stepped back into a distant blue and colours have regained their proper values, the ship stands out clearly and offers her badges for your inspection. A peaceful merchantman, she has no need (as the ship of war has) to cloak her identity. Rather, she courts your attention, and makes an effort to advertise her active seafaring by brave display of the colours of her Line. First in prominent appeal to the eye, the funnels with their many and varied markings tell of the company to which she belongs. Of these, the best known are the brilliant reds of the Cunard and Castle Lines, the yellow of the Canadian Pacific and Royal Mail, the pale buff of the White Star, the black and narrow white band of the International, and the shiny blacks of the P. and O., Anchor, Booth, and African Mail Liners.[1] Then, the " house " flag is always fluttering at the mainmast-head and invites a scrutiny. This is the intimate badge of the ship and Line and is one of which we sailors are so affectionately proud that we lavish our somewhat solid jests on them. (The gold lion with the orb that stands out on the red background of the Cunard house flag is known as " the monkey with th' nut," but, if you have any regard for peace, do not quote this on the Pierhead at Liverpool!) Many of these cherished emblems have their origin in the very early days of seafaring. The flag of the Hudson's Bay Company is the lineal successor to the banner of " The Governor and Company of Gentlemen Adventurers of England trading into Hudson's Bay" of 1670. Many of the liners of to-day fly the same flags that graced the mast-heads of the wonderful clipper ships that carried the white colonist to every remote quarter of the globe. They mean as much to us as battle flags; our whole sea history is closely wrapped in them.

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[1] A sheet of " Ships' Funnels and House Flags " may be had at any seaport bookshop.

It is not always necessary to look at the ensign that flies from a vessel's flagstaff in order to establish to what country she belongs. Many observant sailors can even tell her port of registry at a shrewd glance, for there are as many local habits and customs and forms of embellishment afloat as ashore. Nearly every maritime nation has a certain impress of nationality somewhere on the ships, and these may be detected at a distance at which the colours of an ensign would not be plain. Most steamships have a black-painted top above the colour line of their funnels, a device to meet the discolouration caused by smoke. A variation in the depth of this top is a notable distinguishing mark. In British vessels, the convention is that the black must be painted down to the same depth as the diameter of the funnel. French ships have black tops of much less depth, and the rims of their funnels are frequently higher on the after side. They look much as if they had been sheared by a giant knife at one tremendous sweep. American ships have not yet established a convention in funnel adornment, but they seem to favour a very narrow black top, probably following the custom of United States warships and Government cutters. Many of the new American companies use bold, courageous colours, and this is good (for the purpose of a funnel paint should be to aid recognition), but, in the great allotment of ships that followed upon the close of the war, the vessels fell into strange hands. I wonder if it was a theatrical costumier who devised the one vivid green funnel I saw lately? It was new to the sea. Green is an indeterminate colour at a distance and is of little value.

The rake of a vessel's masts and funnels, that is, the angle at which such uprights are set in the deck of a ship, is often useful in helping to determine nationality. American ships generally and the most modern British cargo vessels have sturdy upright funnels (pipes or stacks they call them over west) and these, with the short, strong masts, are set at a rigid right-angle to the deck. Almost, they look as though they had been stabbed in while the ship lay on the ways. But they do stamp the vessel with a purposeful character, as though to say, "Here I am! Ye can take me or leave me, but I'm not going to bend or curtsey to any one!" Certainly a laudable pose. But most British ships, and the liners in particular, are partial to a modest rake that sets off their fine lines and sheer. Perhaps they may be assumed to murmur, “ Yes! That’s all right! We know about independence and all that sort of thing, but you must remember that old Father Neptune likes the slope we carry, and lets us go ahead comfortably when you stern ‘ unbenders ’ have to come up in the wind and wait for better weather! ” . . . It is a fact, peculiar and perhaps unaccountable, that the most graceful ships are the most sea-kindly in a gale.

While Scandinavian lines differ only in their funnel marks from the great ships of other nations, the northern cargo vessels (generally small in tonnage) are distinctive in appearance. They have tall pipe-like funnels, and these are rarely painted in any other colours than those contained in the blazonry of their national ensign. Masts are short, but somewhat heavier than one would look for in vessels of such tonnage. The deckhouses and other erections above the hull are higher than is usual and they are cramped together in little “ island ” formations to allow of the convenient carriage of timber deck-loads that is so often their trade. They are comfortable, homely little ships and their names are short and unassuming, being rarely of more than two syllables. Greek vessels have a blue and white design (the colours of the Greek flag) on their funnels, and—as a contrast to the brief names of the Scandinavian ships—the Greeks can hardly find room enough on the bows to set out the full titles, generally compound, of their vessels.

There is not much variation in the deck and hull colours of steamships. Generally, the outer body is black, while the rails and deckhouses are painted white, but a few of the great Lines (notably the P. & O. with their "pea-soup" deck paint) stand fast by an old colour scheme that began in bluff-bowed East Indiamen. An important Line on the East Coast have hulls with a red bottom colour and bright green above. They are known as the "parakeets." The Union-Castle Line, the United Fruit Company, the eastern service ships of the Canadian Pacific and some few South American liners favour a light grey on their hulls, and this, when weathered to a fine white by wind and sea, is an ideal colour for tropical seas. But black is a good standing colour, and this is a valuable quality in these days of costly paint and comparatively small crews.

Although the colouring of the large masses in ships is not varied to any great extent, there are numberless matters of detail that an observant lookoutman may make a note of against a chance meeting at sea. Just as clothes and character in a man are correlated, so the character of ships is expressed in their appointments and the manner in which these are maintained. London-owned ships are notable for smart paintwork about the decks. Most of the larger ones are engaged in the fine-weather trades where the incidence of good “ working ” days is sufficient to ensure a thorough overhaul and upkeep. They are rarely seen in that semi-respectable stage that has favour with economical owners, a stage of sectional renovation in which one expanse of paintwork may be spotless while another has to get along with “ a lick and a promise.” The great Liverpool liners are resplendent in tier on tier of pearl-white promenades, but Mersey ships in general go in for a scheme of half-panels in painting the long sides of deckhouses and passage-ways. The upper strake of the panels is white: the lower, brown, or some other good wearing colour that can carry grime and the rubbing contact of longshore workmen without smirching unduly. A feature of most Liverpool ships is the thin yellow sheer ribbon that extends from bow to stern along the upper plating of the hull and draws attention to its fine lines and contour. Cardiff vessels and those of the East Coast ports are neutral in their deck adornment. The carriage of coal, that is their principal business, is a somewhat difficult trade in which to keep up appearances, but, if they are a little “ grim ” about the decks, they make up for it in their gaudy funnel markings. The fine mail liners of Southampton are patrician in appearance, exquisitely groomed. One never sees them in a hurry, or, as is so often the case with the hardened North Atlantic ships, brisking decks at the last moment before the passengers are due to board. The Clyde ships? Ah! I sail in a Clyde ship, so perhaps it would be improper for me to call attention to their spotless white paint with black fittings and margins, decks well holystoned and scrubbed with sand, shining brass and polished teakwood. . . . It is a pity, for I would like to write of our personal pride in a well-kept ship!

It is perhaps too early yet to speak of typical character, in paintwork and upkeep, of the American ships, now so numerous in ports where, for long, their flag was unfamiliar. Many of them are exceedingly well-kept and trim vessels, and the standard of their appointments is probably higher than most other vessels of their class. A workman-like iron-grey paint for deckhouses and bulwarks is common, but this is likely to be superseded—as in the newer ships—by a pale yellow similar to that of United States Government vessels. The other day I watched a large American cargo steamer coming in from sea. She was of a type turned out in war emergency from the yards of the eastern seaboard. A heavy ship; of good substantial build, but marred by the needlessly ugly design of her spars and deck-furniture. The dæmons of a quasi-efficiency that can only see utility in ugliness had done their worst in her. Doubtless she would be the very last word in "quick despatch," but she looked a difficult ship to put in such a fine trim that a sailor would look twice at her from the beach. As she passed, I saw something that held my eyes. I noticed a sound revival of an old Yankee trade-mark. She had a gilt eagle, with wings outspread, set up over the bridge, and her name (an Indian one) was neatly carved and put out in golden letters on the side of her wheelhouse. Other American vessels have carried this further, a fine shield of the national colours being displayed amidships.

The state of a vessel's loading makes a great difference in her appearance. When there is no cargo on board, she stands high in the water and, in vessels of the "tramp" class, her propeller goes thrashing round, making a fine lash of foam at the stern. At sea, the beat of her screw can be heard for a great distance when she is in this trim. One hears such a ship go past in fog when no part of her may be visible. There is an odd suggestion of "flightiness" about a light ship as she goes thumping and clattering down the channels, steering from a port in which she has unloaded her cargo to another where a new burden may be stowed in her. The petticoat of red bottom colour (that is never seen when she is loaded to her Plimsoll marks) attracts attention to her behaviour, and her high wall-like sides seem out of all proportion to her upper works. When deep-loaded, she seems a different ship altogether. The " race " of the propeller is subdued to a modest churning astern, her black top-sides sit soberly in the water, and she glides past, stiffly and upright, as though she had never danced a sea-jig in her life!

A GREAT SHIP IN DOCK TAKING OIL FUEL

Plate 2

Chapter 2: *The Great Ships*

THERE are " lucky " men in every ship's company. I do not mean that the gods shower gifts upon them or that wealth and honours are theirs by hazard, but rather that these favoured individuals of the crew (when stationed at some particular post of duty such as the wheel and the lookout) bring a measure of good fortune to the ship or are themselves happily placed when some rare event occurs. The steersman in a sailing ship, where no better fortune could be than a brisk, fair wind to send her along, was often the subject of his shipmates' critical comment, particularly when a long spell of contrary winds and little progress had aroused a spirit of discontent.

" Fair winds! " an old hand once said to me, despondently, " 'oo th' blazes is talkin' about fair winds, an' that man Shmidt at th' wheel? 'Ow d'ye expeck a fair wind with a Finn—a Rooshian bloomin' Finn—a-steerin' ov 'er? . . . No, sir! I ain't no prophet, but ye won't 'ave no fair wind till a lucky man goes aft t' th' wheel. I ain't what ye c'd call lucky—me bein' a Liverpool man—but there's Collins. Coloured men is lucky an' West-countrymen an' South of Ireland men—if they ain't got black 'air—but Finns? . . . Finns is th' wusst o' bad luck. Knowed a Finn wunnst wot raised a n'owlin' gale against us, out o' spite!"

He is a "lucky" man indeed, the lookoutman whose good fortune it is to strike three bells for a vessel ahead, and then make her out to be one of the great ships heading to pass close-to in the comparatively narrow fairway of the Ambrose Channel. There is no need for him to worry about the meeting of the ships in such restricted tidal waters: the officers on the bridge, and more particularly the Sandy Hook pilot (who is already clearing his throat and loosening his collar) can be left to raise grey hairs over that. It is the good fortune of the man aloft to be up in the crow's nest, from which the very finest view can be had and where there are no other duties to take him from the full enjoyment of the spectacle. Doubtless, he compares his turn of lookout with that of the man he relieved, a Jonah who never has any luck, and who saw only a coasting steamer and a tow of transport barges in all the two hours of his watch.

There is barely time for him to polish up his binoculars before the two ships draw close and each edges over to her own legal side of the fairway. ("*In narrow channels every steam-vessel shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which lies on the starboard side* *of such vessel.*" Article 25.) Although the buoyed channel appeared wide enough for liberal navigation when steamships of considerable tonnage had lately passed, it seems now suddenly to contract with the coming of the gigantic liner. Her majestic proportions are emphasized by the slight angle at which she steers for clearance and, from the lookoutman's post aloft, she appears to take up the whole breadth of the fairway. Her great sheering stem parts the waters and piles up a crest of white foam under the shapely structure of the bows. At a short distance ahead the influence of her displacement is shown in an undulating movement of the sea surface. She is doubtless slowed to a moderate speed at this time, but even at that reduction the waters of the channel are stirred violently, and the sea between the two vessels thrashes in a conflict of bow waves. The wash of the great liner is quickly victorious and breaks in a sharp upthrow of spray on the side of the smaller vessel as the leviathan goes past.

The lookoutman puts down the binoculars. Of what use to focus pebbles on the hillside? The astounding spectacle is not for an examination of detail, but rather for one awed survey when forty-five thousand tons, moving easily and answering swiftly to but a touch of the helm, goes safely by!

* * * * *

They are the perfection in ship-craft of the builder, these great liners designed exclusively for mail and passenger services. In them there is expressed every sound calculation, every brilliant point of reasoning, every provision that a hard practical experience has handed down through centuries of trial. Even if we put aside the generations that contributed to the outer form of the ship, and concern ourselves alone with steam power that is in them, the liners come of a long and healthy race. Beginning with the *Cleremont* and the *Comet,* striking out across wide seas in *Savannah* and *Sirius,* increasing power and tonnage in the ten-year reigns of such ocean monarchs as *Acadia, Scotia, City of Berlin, Etruria, Campania,* and *Deutschland,* the modern leviathan owes everything she is to those foremothers whose aggregate tonnage was no greater than that of her own alone.

In the company of giants, size becomes a matter of comparison. I have devoted this chapter to the ten great liners that are our sovereigns on the sea, establishing their regal claims at not less than twenty-five thousand tons. Great Britain has six—*Majestic, Berengaria, Olympic, Aquitania, Homeric, Mauretania.* The United States has two—*Leviathan* and *George Washington.* France has one, *Paris,* and Belgium one, *Belgenland.*

These are our real Sea Queens, not merely because of their great size but rather by virtue of the completeness and safety of their performance. Magnificent and luxurious appointments that please our wealthy travellers do not very greatly impress the sailor. While attracted by beauty in a ship, we are not inordinately fond of gaudy trappings. Our loyalty and respect must be stimulated and upheld by an appeal to our own fastidious professional standards. Has she good power? Does she steer well and easily? Is she reliable and tractable in the great testing seas of an Atlantic hurricane? Is there assurance of quick and precise response to a sudden demand in manœuvre? Power, strength, stability—in a word, seaworthiness is the quality to arouse our enthusiasm, and our ocean sovereigns are seaworthy above all. They make their regal progress across the oceans with almost the exactitude of a rail-bound express; the worst that wind or sea can do holds little to be feared by them; they come and go on their appointed schedules, dignified, precise, powerful, compelling the homage of lesser craft.

All these ten great ships are designed for transatlantic voyages: there is no other route on which sufficient business to employ them exists. At one time, speed, as *the* element in competition for passenger trade, was most strikingly manifest when each successive ocean monarch came from the hands of the ship-builder. In 1862, the wonderful *Scotia* took less than nine days to make the passage from Queenstown to Sandy Hook. *Mauretania* slipped across in less than half of that time in 1909. Since then, we have learnt sadly that traverse of Father Neptune's domain is not to be forced by horse-power alone, and the modern great liner, while possessing a turn of high speed for a clear-weather spurt, is built more with a view to ensuring good time-keeping and providing an equivalent at sea to the standards of metropolitan life ashore.

Vessels of this "super-class" load little or no cargo. It is somewhat of a paradox that the greater the ship, the less the cargo she can carry. This is not wholly explained by the simple reflection that passengers must occupy the space that would otherwise be devoted to cargo. Humans weigh but little. An average thousand passengers would tip no more than fifty to sixty tons! Certainly, there is a "compound interest" on this (the passenger, his belongings, his food; his attendants, their belongings, their food; and so on as far as one may care to go), but, in any case, the sum of the personal tonnage is absurdly small when compared with the burden of the ship herself and the weighty means to propel her. The high speed of these great vessels demands a vast capacity for the stowage of fuel alone, although the now common use of oil fuel has reduced this requirement of space considerably:

engines and boilers to maintain that speed are correspondingly large: weighty auxiliary machinery to provide electric light and power, heat, ventilation, all help to swell the huge total of dead-weight. There is ample room for the passenger and his handgrips on the upper decks, room and enough for his rest and comfort and convenience and recreation, but his heavy baggage and the food required to sustain him demand further accommodation in the large holds and store-rooms below. With space reserved for the mails, there is but little room left over for cargo. At the most, it may allow of a few hundred, perhaps a thousand, tons being stowed. But what it may lack in quantity, the goods so quickly transported make up for in a very special quality. Of little bulk, but precious in character, such merchandise as jewellery, dyes, fine clothing, works of art, bullion and specie, is carried. The value of such a ship and the burden she bears is not easily estimated; one would hesitate to set a valuation upon the three or four thousand souls aboard her.

There is little need for a guide to the recognition of a magnificent vessel of this class. Viewed in the river or by the dock-side, her massive proportions (dwarfing those of all other nearby vessels) rivet the attention. She towers among the shipping, a Colossus, overriding even the considerable claims of the many large vessels in the harbour. Ruled by long lines of shining brass port-rims, her hull rises from the water in a terracing of heavily-riveted plates. The contour of these is not at once apparent. At first sight, the eye accepts little more than an impression of a huge iron wall, studded by an endless repetition of butts and landings. A less intent survey reveals the marvellous form of the ship, the skilfully worked bend and trim of the plating by which her huge sides, encompassing the area of a floating city, are wrought into the delicate modelling of her fine bows. Tier upon tier, set back in length as they mount, the promenades and superstructures of the giant offer no suggestion of uncomfortable top-hamper. She sits easily in the water; she carries her great bulk calmly; there is not a trace of corpulency or overweight in the shapely lines of her.

But this near view is not perhaps the best. It is difficult to avoid a concentration on some particular point of interest. Imposing spectacle as she offers, one becomes impatient to see her waken and throb to the power that is in her. A great structure is nothing uncommon on land, but a structure such as this, that is mobile, that has life, that can bridge the oceans, is not seen at its grandest and most inspiring moment in the harsh confinement of a dock. ". . . A virtue goes out of a ship when she reaches her quay. Her beauty and purpose are, for the moment, dulled. . . . A ship in dock! It is like a lion in a circus cage! She, the beauty, the lovely living creature of open azure and the great striding ranges of the sea, she who needs horizons and planets for her fitting perspective, she who asks the snow and silver at her irresistible stem, she who persecutes the sunset across the purple curves of the longitudes, tied up stiffly in a dock! . . . The upward slope of that great bow was never made to stand still against a dusty pier-end! " So says Christopher Morley, and he is right. " The great striding ranges of the sea " form the only proper setting for an emotional view of a great steamship. At anchor or in dock, she lies inert, as immobile as the masonry of the quays or the house-clad hillside that stands over the sheds and warehouses; but unmoored and turned in the harbour, she wakens to a brave sea-life and throbs exultantly as the round of her powerful engines begins. With the pilot disembarked at the bar, the land and its fretful affairs no longer concern her. Full steam roars through her arteries and she settles to cover three thousand miles in a swift and tireless passage.

Perhaps the most dramatic moment to observe her is when she sails at dusk. The emphasis of a period in the flight of time is there in the darkling sky and quiet resignation of the channel estuary. Her departure from the land as daylight fails is at once a splendid expression of courage and high confidence and an emotional gesture of farewell. The waning light is still sufficient to outline the dark masses of her upper-works against the sky, and the glitter and reflection of the lighted ports below set out the great hull in a myriad jewelled points. The eye follows her as she passes out to sea and the glow dies on a distant and mysterious horizon. The gleam of the lights aboard may arouse a thought of those who sail in her. Almost it looks as if a coastal town had suddenly detached itself from the friendly shelter of the land and gone abroad on the sea.

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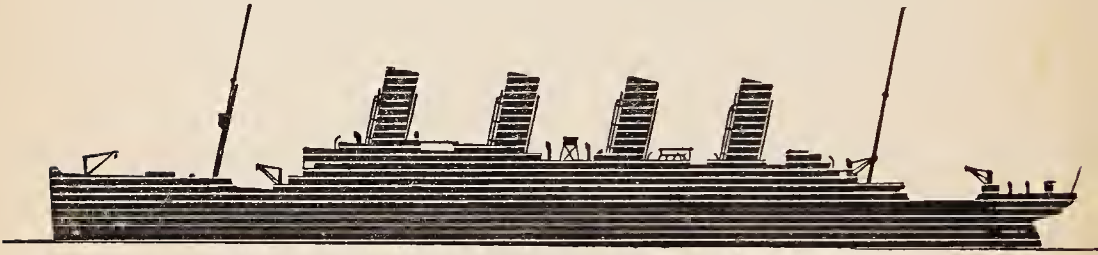
It is the dream of many sailors to retire from the sea when old age comes; to settle ashore somewhere within sight and sound of it, but sufficiently far removed that its syren call may be pleasantly ignored. In such a situation a garden or small farm would provide interest and occupation for our declining years. The pleasures of intimacy with plants and fruits and flowers (that was denied to our seafaring days) might be there recaptured. I think it is Horace who is responsible for our expression of this longing desire. When things are very black at sea, we turn to one another and utter an ironic paraphrase of his lines. “ Who wouldn’t sell his farm and go to sea? ” say we, buckling our oilskins or bending into the wind to shield our eyes from the cutting lash of bitter sleet.

It seems almost that we are on the way to a strange and unexpected realization of these, our longing desires, and the marvel of it is that we need not retire to the shore to indulge our fancies. In the great ships, we are now taking our farms to sea with us, for the captain of a huge liner, speaking of his inability to recognize all the members of his crew of nine hundred “ hands ” (including the manicurists, bell-boys, lift-attendants, switch-operators, bandsmen, bookstall clerks, or even the *kinematographische-projektirensmann* that I saw on the books of an ex-German leviathan), mentioned a significant fact. He said that he found it difficult to prescribe the appropriate uniform for a new rating —the ship’s gardener!

In this near approach to the ideals of life ashore the modern great liner is a perplexing enigma to those who handle her. The conflict of pride in her appointments and resources, and sailorlike aversion to forms and materials that are not shipshape, is curiously present in the mind of the seaman. We are perhaps irritated that no special and shiplike form of design in the interior decoration of these great vessels has been evolved from the fine and often superlatively beautiful appointments of their early prototypes. Why should the distinctive structural features of her magnificent and shapely hull be trimmed and distorted into the semblance of "period" rooms and mock-baronial halls? Is it a fair argument that passengers wish to be hypnotized by such a form of camouflage into a belief that they are not really at sea? If so, is there not a grave danger that such a form of auto-suggestion may react on hotel guests ashore? "Oh, mother! Look," a young woman might say in the lounge of the Superstoria Hotel at New York! "If this room had only a nice Renaissance fireplace at that end, it would look exactly like the cabin of a ship!" . . . "Oh, my dear!" her mother might well reply. "I wish you hadn't said that. I begin to feel queer already!"



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Even the passengers have been known to protest mildly against this trend of excessive luxury and landward adornment. One (who was surely a seaman at heart) has finely registered his impressions.

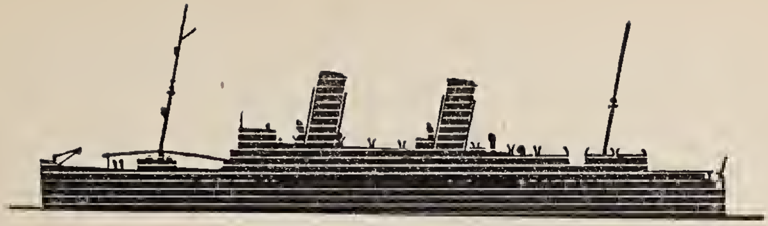
". . . I found myself in a spacious decorated interior which hinted nothing of a ship, for I was puzzled as to direction. My last ship could be surveyed in two glances; she looked, and was, a comprehensible ship, no more than a manageable handful for an able master. In that ship you could see at once where you were and what to do. But in this liner you could not see where you were, and would never know which way to take unless you had a good memory. No understanding came to me in that hall of a measured and shapely body, designed with a cunning informed by ages of sea lore to move buoyantly and surely among the ranging seas, to balance delicately, a quick and sensitive being, to every precarious slope, to recover a lost poise easily and with the grace natural to a quick creature controlled by an alert mind.

"There was no shape at all to this structure. I could see no line the run of which gave me warrant that it was comprised in the rondure of a ship. The lines were all of straight corridors, which, for all I knew, might have ended blindly on open space, as streets which traverse a city and are bare in vacancy beyond the dwellings. It was possible that we were encompassed by walls, but only one wall was visible. . . . There were offices and doors everywhere. On a broad staircase a multitude of us wandered aimlessly up and down. Each side of the stairway were electric lifts, intermittent and brilliant apparitions. I began to understand why the saloon passengers thought nothing of the voyage. They were encountering nothing unfamiliar. They had but come to another hotel for a few days."

I wish H. M. Tomlinson (have you read *Old Junk?*) had sailed with me. I would have shown him the other pan of the scales, the weighty accumulation of safety devices and costly navigational equipment (with a makeweight of comfort, convenience, and efficiency) that has come to the sailor as a direct result of the passengers' demands, the same demands that brought on the shipment of Persian rugs and ormolu fittings. I am sure he would have looked with a more tolerant eye on the luxurious appointments which puzzled him if he had seen the worth and extent of our wonderful new sea-gear. Automatic fire alarms; an efficient system whereby the water-tight doors below may be closed instantly from the bridge; motor sounding machines; stability indicators; telephone and voice-tube controls. Certainly a complete equipment. I would have shown him a gyroscopic compass that gives us a true meridian without reference to the mysterious curves of magnetism that often lead ships astray. Perhaps he would have put the hydrophone "clappers" over his ears; he might have heard Nantucket *pinging* her submarine bell for a warning twelve miles away. Direction-finders? I would have sent him to bed in a fog completely satisfied that we were heading well clear of the Virgins. If he were wishful for variety, he could have picked up the wireless 'phones to listen in while a Westinghouse expert, seven hundred miles distant, was informing a breathless world who had won the ball games at Buffalo!

But again that conflict of pride and resentment that is curiously present in our sailor mind demands an expression. While it is undeniable that the great passenger liner has added a magnificent and enthralling interest to seafaring, there are those among us—mostly of the sail-trained breed—who find much to regret in the "longshore" influences of such splendid voyaging. We are perhaps unduly conservative in our devotion to an order of things long since condemned. Our sea, a place of strange deeds and wonderful tales, has now been reft of much of the character we would have it wrapped in. Sea habit, of which we were once so proud and jealous, can no longer be affected to impress the credulous "landlubber." Instead, the habits and customary life of the land have been brought far out to sea. Our great ships may be truly described as "floating hotels," and all the merits and demerits of such landward institutions are firmly established on salt water. If some may regret the passing of a day when seamen preserved a marked individuality, we cannot but rejoice at our incalculable gain in this new traffic with the land. We recognize that it is by no effort of ours that these wonderful Sea Queens come sailing on the sea. The demand of the ocean traveller conceived them, and we cannot but be grateful to the passenger. We like him to have his electric elevators and marble baths, for has he not ensured us, the sailors, a comfort and safety that, without his assistance, would perhaps be overdue?

A MAIL LINER CANTING IN THE MERSEY



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Chapter 3: *Mail Liners*

COMING up to Liverpool on the flood the ship must be canted so that she may enter dock or haul alongside the landing-stage while stemming the swift-running tide. When the last of the channel buoys has been passed, it is time for the pilot to think of this manœuvre, and he scans the shipping ahead through his glasses, seeking a good berth in which to swing her. He has little choice on busy days, particularly when the ship is late on the tide and the dock-gates on each side of the river are open to let outward-bound vessels away. And it is just at this hour that the small craft swarm into the fairway, intent on making the best use of "the top of the tide." Flats and barges, that have as much right to the broad of the river as any palatial liner, are insistent on their privilege, and tack slowly towards the very spot that the pilot, for want of a better, has chosen as the least congested area in which to turn the ship. He stamps impatiently and rings "slow" to the engine-room. The "cream of the speed" that has caressed the liner's bows all the way from the bar dies down to a marbly froth lying flat on the water and, at such a cautious rate of progress, the ship enters the crowded river.

After a long voyage across the ocean, the renewal of intercourse with the land is always interesting; in particular, the form and phrasing of the first vocal hails from without the ship are sufficiently curious to attract attention. The pilot's "*G'd day, Capten,*" as he mounts the bridge ladder and takes up his duties is quiet and appropriate. He has no time for conversation until the ship has been steadied on the channel course and the speed adjusted to his liking. But "*Good day*" as a hail from another vessel would be banal and lubberlike. The best and most hearty greeting is the stentorian shout from a Customs launch. "*The ship, a-hoy!*" she roars. "*Where are ye from?*" The Liverpool tugmen have a way of their own. Ships out and ships in are their daily associates, and there need be no flourish at arrival or departure. . . . When the incoming vessel has passed the Rock, a powerful tug puts off from the north end and ranges alongside in attendance, "Hoory oop, pilot!" shouts the tugman through his battered trumpet. "I bid lookid for ye this last two hourss. They're waitid for ye ad th' Stage! " The pilot, thinking perhaps of his quick passage up channel, has difficulty in framing the correct reply. " Get along forr'ad there and make fast! " he says shortly. " And see you keep that ugly punt of yours out of my way when I'm rounding-to! "

But the " ugly punt " proves a useful assistant when, with the helm over and her port screws thrashing for sternway, the liner sheers across the tide in a skilfully timed manœuvre. Well handled, her stem cuts across the wake of a small vessel bound out, and she commences the " spin " of her twenty thousand tons. Round she comes! The tugman's best hawser creaks to the great strain upon it when the full force of the current impinges upon the broadside of his tow. It is his business to maintain the liner's head in position while the sweep of the flood bears her stern upstream, and at this, the tug heels over alarmingly in her effort to hold on. She spurs into the tideway with the exertion of her utmost power until a short blast of the big ship's syren signals that canting is safely completed. The liner is now stem-on to the tide, and the pilot has little difficulty in placing her alongside the stage, where the passengers are quickly disembarked. Doubtless he feels satisfied that the swing of the ship was so well timed, for he knows that keen and critical eyes were upon him. In the small steamer, across whose stern-wash he cut so sharply, he recognized the relief "cutter" bound out to the bar with a cargo of brother-pilots.

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If we may term the few greater liners the Sovereigns of the Sea, the numerous mail ships of between twelve and twenty-five thousand tons are certainly of blood-royal. In respect of their accommodation and appointments, there is very little difference between them and their bigger sisters. The average of speed is perhaps slightly less, but in few other particulars are the lesser liners inferior. They might quite suitably have been grouped with the great ships, but the emphasis of tonnage (which loses much of its apparent value over a twenty-five thousand tons point) would possibly have been insufficiently impressed on the reader. Let him reflect that *Celtic* (20,904 tons), *American Legion* (13,000) and *Lafayette* (12,220), all three large steamships, combined are only equal to one *Aquitania!*

Most of these smaller, but still great liners, are employed on the North Atlantic, though they serve also on the eastern, southern, and Pacific routes. Many new vessels of this type are approaching completion in the world's shipyards and, as it seems unlikely that any new ships of the greater class will be laid down in the near future, the mail liners

A SINGLE-FUNNEL MAIL LINER

Plate 4

may be looked upon as the heirs apparent to the maritime thrones of the nations.

The paradox of "big ships and little cargo" does not usually apply to the vessels of this class, many of them being able to transport large consignments. In the proportions of power to size and tonnage, they have not reached that point at which a few feet in length and an extra half-knot in speed demand an extravagant and disproportionate increase in the spaces set apart for the service of the ship herself. One would be bold indeed (in these days of swift invention) to assert that, in the well-built mail liner of this type, we have reached the long-sought combination of size and speed, economy in propulsion, convenience and comfort in passenger accommodation, moderation in the numbers of a crew, and profitable cargo-carrying capacity: but this may be said, that we are sailing very close to the wind and making good progress.

While it is not difficult to note the difference between these large liners and their huge sisters of the superior class (the disparity in size being at once apparent), the great variety in type of this smaller but very important group renders them hard to label in such a manner that they may be readily identified. A representative vessel is not easily found in this range of magnificent ships, each possessing some feature peculiar to the service in which she is engaged. In respect of the traditional marks of a ship's importance, the masts, and of a steamship's power, the funnels, one is at a loss to determine what combination of these prominent spars and structures is typical of the mail liner. In the hundred and seventy vessels, there is practically every variation that two to four masts and one to four funnels may provide. Perhaps the most noticeable feature of these splendid vessels, and one that is common to them all, is the massive and shapely proportion of their hulls. In this, they have every fine line of the "great ship" class reduced to the scale of their lesser tonnage.

Many of these large mail liners now use oil instead of coal to raise and maintain steam. Practically every vessel of this class now under construction is being so fitted, for the advantage of oil over coal in such ships is more clearly marked than in those of lower speeds. The old laborious system of coaling is done away with, and such a problem as faced the captain of a large troopship in one of the small "open" ports of the Mediterranean is not likely to come again for decision. He came ashore one day in a state of grave anxiety. His grievance was with the coaling authorities of the port. As he put it, he would have to "up anchors and get out of it" while he had the means to clear, for, while all the facilities of the port could only give him two hundred tons of coal per day, he consumed two hundred and fifty in that time to keep the necessary "open roadstead" steam on the ship. With oil fuel and its quick steam-raising powers, he would not have required to maintain such a pressure. The possibilities of bad weather that he, a prudent shipmaster, was guarding against, would not greatly have disturbed him. With the first sign of a sudden gale (and sudden they are in the eastern Mediterranean) an order to the engine room could be given. Come the gale, and the ship fretting at the poor hold of her anchors, he could await developments with the comforting assurance that, at any moment, he might "up anchors and get out of it" to seek safety on the open sea.

4.

Although the installation of oil-burning systems into ships formerly using coal has changed their appearance no more than to supply blue smoke for black, a number of the newly-built liners fitted permanently as oil-burners are remarkable for a courageous departure from convention in their outward appearance. The plural funnel is abandoned in favour of one sturdy independent. New types of engines and boilers and the abolition of belching volumes of smoke have made it possible to get along admirably with one funnel, and much valuable space has been gained. A single-funnelled liner is not altogether a rarity, as the magnificent ships of the Royal Mail Company have been conspicuous in this respect since 1910, but it is a new departure in a passenger service to New York, and has aroused considerable comment. These fine liners are remarkable in another respect. They represent the standard ship, *satis superque.* They embody a design in which all important parts in structure and machinery are of a standard pattern and can be at once replaced in the event (an unlikely one, considering their strength) of a casualty. They are very imposing vessels of about 20,000 tons. Although possessing a good turn of speed, they are not designed for express service, but rely rather on steady time-keeping and the provision of all the essentials for a safe and comfortable voyage as their appeal to ocean travellers.

The subject of steamship funnels is much discussed at sea. It has taken the place of our long disputes about the " rig " of ship and barque. We

THE EASTERN MAIL AT PORT SAID

Plate 5

are not perhaps as violently stirred as we were when our favourite sail plan was assailed, but our views of what is right in the placing of funnels are almost as varied as our contentions in the old arts of the square rig. Right reason or none, we have come to regard funnels as the symbols of a vessel's size and speed, and even strength. We have established an aristocracy of ships, in which upstanding chimneys are the badges of rank. Just as we painted dummy gun-ports on the sheer-strakes of our old sailing ships to impress the simple emigrant, so we made a feature of the "smoke stacks." The Inman *City of Paris* and *City of New York*, *Deutschland* and *Kaiser Wilhelm*, and later, the beautiful Cunard sisters, *Mauretania* and *Lusitania*, set up a firm belief that nothing less than three funnels could be the essential mark of a noble ship. It is true that, in these fine ships, the design and numbers of the boilers made their plural funnels necessary, but did we not call in the poster artist and give him *carte blanche* to cover the hoardings with massive bows,

5.

extravagant funnels, and unduly diminutive tugs in the near foreground? This we did, and we cannot complain if the travelling public is now somewhat confused by our bold new doctrine of simpler proportions.

Some time ago a large band of continental emigrants arrived at Glasgow for passage to the United States. The *Cameronia* (the first), a fine vessel of 12,000 tons, was there to take them. Quite suddenly a commotion arose. Hands were held up to high heaven. Loud protests in the many-vowelled dialects of northern Europe sounded out. The women and children sat stiffly on their bundles on the quay. The men of the party stood up with a fine air of decision. All of them refused to go on board. It was of no use for the interpreter to argue and exhort them to mount the gangway. Not a man would stir. "*Naw two e-shmoke*," they cried, pointing to the ship's two tall funnels. Then, producing their passage tickets, on which there was a cut of the three-funnelled *City of Rome* (a gallant old ship, long since vanished into the shipbreakers' yard), they waved the papers angrily. "*Naw two e-shmoke*," they cried. "*Two e-shmoke, no goot! . . . Tree shmoke, goot!*"

What shall we do when the motor liners come? They have no funnels.

AN INTERMEDIATE LINER

6.

Chapter 4: *Intermediate and Cargo Liners*

THUS far, the classification of the two very great types of modern steamships has presented no serious difficulty, but when I come to consider the jungle of masts and funnels and derrick spars into which I must venture in search of the average and typical, I have grave apprehensions. My shepherding is perhaps at fault. I have now to consider a situation in which many stray sheep are wandering at random. Many of them are bleating at the fold-gates which I have already barred. A hazard of a ton or two in measurement has prevented them going in with their fellows. I must build another fold and label it "Intermediate Liners." . . . But, even with that well stocked, I have only diminished the number of my strays. I have decided to make a job of it, and put "Cargo Liners" in with the flock!

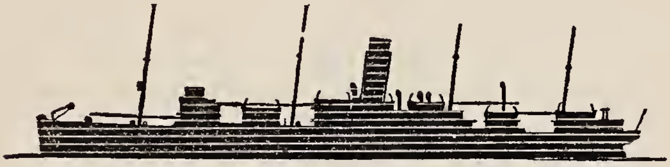
Intermediate liners form a large and powerful class. The great speed developed in the mail vessels is, in them, reduced to an economical ratio that ensures good progress when loaded with a large cargo. In tonnage they range from eight to twelve thousand tons, although many of the largest vessels (the "strays" to which I referred) exceed this. The average of speed is about fourteen knots. They have accommodation for large numbers of cabin and steerage passengers, and having bigger, if less pretentious state-rooms than the more elaborate mail liners, they are greatly favoured by those who desire comfort rather than luxury on a long sea voyage. The weight of the large cargoes they transport makes them very steady in a sea-way, and this is often an added inducement to passengers to sail in them. As this is a very large class, numerically, it would become a task to detail the numbers of such vessels in the order of their respective flags. Briefly, the intermediate liners of Great Britain have the predominance in point of numbers, size, and total tonnage.

A fine type is the powerful vessel engaged in the Australian trade. She is over five hundred feet in length (the right size for the long and stormy ocean track that lies between the Cape and the Leeuwin). She has four masts and one funnel, an admirable disposition to set out the fine proportions

A COLONIAL LINER OUTWARD BOUND

Plate.7

of a long ship. Her superstructures of passenger accommodation, promenade decks, the line of lifeboats, and the casings of stokehold and engine-rooms, extend for about two-thirds of her length, occupying the midship and after sections of the ship. Trunk-ways are built through the superstructures, and these, with the wide hatchways on the forward deck, provide entry to the capacious holds, in which a heavy lading of cargo is carried. Serving on a route where coaling stations are long distances apart, she is especially strengthened to withstand certain stresses to which the shorter-voyage steamship is rarely subjected. At the Cape of Good Hope she loads sufficient coal to enable her to steam east. Albany or Adelaide or Hobart may be her next port, a straight run of over five thousand miles in one stretch. During that passage she eats up 3,500 tons in weight of her stability —in the coal she burns. A certain compensation in water ballast admitted to the double-bottom



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tanks can be made to help her, but she must needs be a strong vessel to withstand the great strain of her ends weighted with cargo and the empty caverns of her depleted coal-bunkers in the middle.

Proceeding outward by way of the Cape of Good Hope, many of these vessels return by continuing their course to the eastward. In preference to the tortuous channels of the Magellan Strait, the old sea route round Cape Horn may be used occasionally. But choice is now only rarely offered, as on such eastward voyages the Panama Canal presents a quicker and more direct route. The large cargoes of frozen meat and other colonial produce come to us by way of "Cape Stiff" only when a call has to be made at Montevideo or Buenos Ayres.

The old traditions of seafaring have lingered in these Australian liners for a much longer time than in the shorter and more "hurried" trades of the North Atlantic. The long ocean voyage and infrequent traffics with the shore at ports of call have good effect on the character of their seamen. Generally, they are fine sailormen—not the casuals and half-trained deck-hands who form such a large proportion of our manning in the Atlantic ferries. The intimacy of ship and watch mates that was the fine, kindly feature of life aboard a sailing ship is preserved and fostered by the nature of the voyage and the lonely seas in which these steamships sail. I can see their seamen in the "dog watches," pacing the fore-deck in colloguing pairs, talking perhaps of their trade and of the winds and recalling the whims and virtues—and vices, too—of the ships in which they have seen service. I have never noted a comradeship of this nature in the North Atlantic ships. Our "hands" are rarely seen in pairs. They form groups and small cliques, and argue bitterly and fiercely over "Cup ties" and "racing form" and other longshore controversial matters. They are too closely and frequently in touch with the shore to see in ships and sailor-life anything more than a purgatory and its divisions, in which a hard living may be gained.

A few of these intermediate liners may yet have a rag or two of square sail to set when winds are fair. If anywhere on salt water, it would be in the Australian traders an old chanteyman could be found, able to rouse a tune to time the pull at sheet or halyard. I wish I knew. I might sign on for a voyage, for I should like to hear "Reuben Ranzo" once again before I forget it. There are many verses, but only three now remain with me.

But Ranzo was no sai-i-lor,
    Ran-zo, boys, *Ran*-zo!
No use aboard a whai-i-lor,
    Ran-zo, boy-es, *Ran*-zo!

But th' Mate he wos a goo-o-d'un,
Ran-zo, boys, *Ran*-zo!
An' taught 'im nav-i-gai-ishun,
Ran-zo, boy-es, *Ran*-zo!

Now 'e's Captin of a Black-Ball li-i-ner,
Ran-zo, boys, *Ran*-zo!
An' nothin' could be fi-i-ner,
Ran-zo, boy-es, *Ran*-zo!

We were rarely allowed to finish the last verse. And this was a pity, for in it lay the whole substance of the song. Certainly it was only a repetition, but we invested it with tremendous ironic emphasis to call forth an angry and stentorian "*Belay*" from the officer.

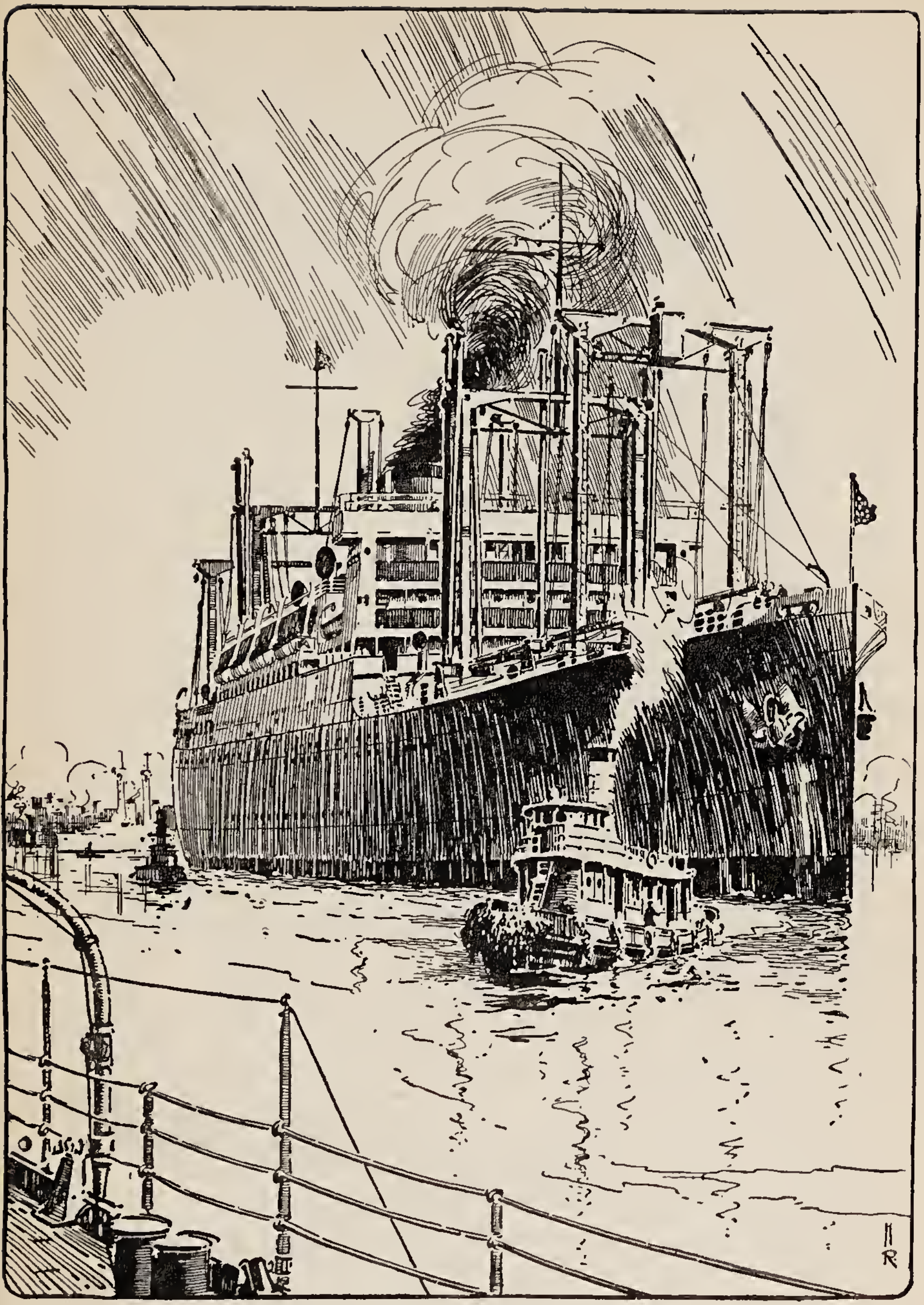
But Ranzo was no sai-i-lor,
Ran-zo, boys, *Ran*-zo!
No use aboard a whai-i-lor,
Ran-zo, boy-es, *Ran*-zo!

* * * * *

The first lookout in the morning watch is always the most interesting turn of duty in the day, and this is particularly the case when, as so often it happens, the land is made at dawn. For the first hour, from four to five, darkness and the morning twilight prevail, and the lookoutman is busily employed in reporting the lights that spring up ahead as the land is closed. In this duty, there is a pleasing sense of anticipation. Striking the bell to call attention to a new flare on the sea-line, he speculates on what kind of vessel it is that shows the light, and, as the daylight grows, he watches the dark, indeterminate mass of the stranger's hull grow out of the gloom and reveal the details of her size and class and trade. Just as the dusk of evening is the fitting moment for a ship's departure, the break of day is the right time for her happy arrival.

To come in from the eastward with the sun is a fine and dramatic entry under any circumstances, and it is nowhere more impressive than when Sandy Hook and the nebulous glimmer of the Port of New York appear ahead and the open Atlantic, dimpling in faint rosy frounces, lies astern. The coast-line of Long Island appears almost unreal in its fairy beauty. The bare sandy shore but faintly visible, and the long-extended chain of seaside lights (that the growing daylight, while robbing them of their brilliance, has invested with a jewel-like sparkle), has not yet become sufficiently defined to stand out as barren and—in the broad of day—uninteresting. Navesink Light, after challenging the darkness hour after hour with his brilliant stabs and flashes, has died down to a valiant but ineffectual diamond point in the dark mass of the Atlantic highlands. Anon, the sun comes up, and the blue haze that lingers over the Hook and the entrance to the channel dissolves at the onset of his rays. The shallow hull of the Ambrose Lightship emerges from the misty curtain, and the outlines of inward-bound ships steering in for the pilot ground become clearly defined.

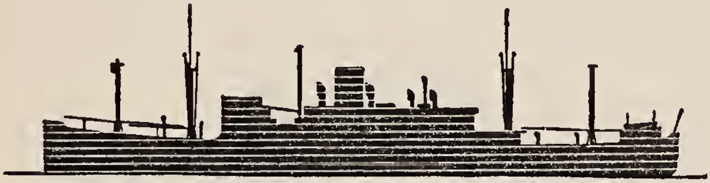
We are particularly interested in two of the vessels that stand in with us to take on their pilots and enter the fairway to New York. The largest is a steamer of about fifteen thousand tons and over five hundred feet in length. She is a curious vessel. At first glance, one is inclined to dismiss her as unworthy of sailorlike attention; she appears to be unnecessarily odd in her proportions; her peculiar features are aggressively at variance with all the accepted standards of a fine ship design. But such a view would be unfair to an excellent, if unorthodox, intermediate liner. She is distinctly a product of the war, and German submarines are to be blamed for her departures from the symmetry of conventional ship architecture. If she could be seen from the point of view of her designer, who was concerned to present a distorted outline to the periscopic survey of an enemy submarine commander, one would doubtless form a better and more kindly estimate of the skill with which this requirement, at least, has been met. She was originally built as one of a transport fleet for the carriage of United States troops, but these vessels were not completed when the war ended. When under construction, she was converted into a cargo-



AN AMERICAN INTERMEDIATE LINER

Plate 8

carrier of large capacity with very fine accommodation for a comparatively limited number of passengers. One of her peculiar (war-time) features is the form of the stern, an ingenious copy of the bow structure of the ship, and one which, together with the upright setting of masts and funnels, made it very difficult for a distant observer to determine whether she was bound east or west. But for this arrangement (which one would hesitate to term seemly) her hull has fine lines and the great flare of the bows is particularly noticeable. Her passenger accommodation is in a box-like superstructure amidships, and is perhaps more ample and convenient than that of vessels having more graceful and less rectangular deck erections. She has a speed of about fifteen knots and is altogether a strong and seaworthy vessel.



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The second of the two vessels, now stopped and awaiting the service of the pilot "cutter," is an intermediate liner well qualified for special mention in any review of maritime affairs. She is engaged in the West Indian trade, in the carriage of fruit. If the great liners may be spoken of as "floating hotels," the fine vessels of this special and numerically small group can be referred to as "sea mansions" for the patronage of paying guests. They are exclusive and, in luxury of accommodation and appointments, they suffer little in comparison with the finest liners afloat. She, the queen of a magnificent white fleet of beautiful ships, measures about eight thousand tons. Her length is four hundred and seventy feet, and her beam fifty-five feet: her speed is sixteen knots. As she accommodates only a comparatively limited number of passengers, the superstructures and deckhouses in which they are carried are not so built up in heavy masses as the tiers of erections on the decks of the larger liners. She has one long promenade deck, with the boats above, and this simple arrangement has great effect in displaying the fine proportions of the hull. As a trading ship, she is favoured above all others by the cleanly nature of the cargo she carries. She has always the appearance of a "genteel" occupation. Fruit, of an even size and quality and calling for precise and careful handling in her insulated holds, has no rough chafing edges or hard projections to rasp her paintwork when loading and discharging operations are being carried on. The hard wear-and-tear to which most ships are subjected on such occasions does not fall upon her. There are few working scars on her smooth sides, and the light grey, almost white, colour of the hull emphasizes her lady-like appearance. She is perhaps the nearest to a pleasure yacht in any catalogue of fine ships.

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I have changed my mind. I think the cargo liners would be much better displayed in a fold of their own. In character, they are somewhat pretentious and might quarrel with the smaller intermediates among which I proposed to herd them. I shall write another chapter.

Chapter 5: *Cargo Liners*

I HAVE said much of " liners," but it occurs to me that I have not sufficiently identified the class of ship to which the term now applies. Generally, she is a ship belonging to a Line or company engaged in regular trade between definite ports, but this requires qualification. In respect of the great passenger ships, there is no ambiguity, but in the lower scales of tonnage there exists a certain overlapping of types, the cargo liner and the general cargo-carrier or " tramp." With ships of the latter class now so improved in size and speed and equipment, any real difference that existed between them and the " liners " has disappeared. To-day, the distinction is largely one of employment, and a cargo vessel might quite easily be a " liner " on the outward voyage and a " tramp " when homeward bound. The cargo liner has a fixed date for sailing from a port. This is duly advertised in advance, and merchants having goods to ship engage to send their consignments to the loading berth before that date. She may include in her cargo shipments from a thousand different merchants. She is like a country carrier, making fixed journeys to town and handling any goods that may

A CARGO LINER PASSING THE BAR

offer. A "tramp," on the other hand, is more like a contractor's wagon, to be hired by the month or year or, alternatively, to take on a full load at one point and at a given date and transport it safely to some other location.

Cargo liners are generally included in the fleets of the great passenger-carrying lines. They sail at regular intervals, augmenting the service of faster and more imposing vessels, but they are by no means unimportant in point of size. They range from five to ten thousand tons, and their power and equipment are rarely inferior to those of their sisters in the fleet. Many of them carry a few passengers, and comfortable berths are offered to travellers who are not greatly pressed for time. The average speed is about twelve knots, an agreeable rate of progress in a well-found ship that has the fine sea qualities of these large cargo-carriers. Shippers of cargo are prepared to pay good freight for carriage of their goods in these ships, as their sailings and arrivals can be determined and anticipated in the course of fluctuations in the markets. All of them are built to be included in the highest class at Lloyds, and, if their appointments are less elaborate than the intermediate liner's, they are well fitted with everything requisite for comfort and safety at sea.

A typical vessel of this class is the cargo liner employed in trade between the United Kingdom and Calcutta. She measures ten thousand tons, but is able to transport no less than fifteen thousand deadweight tons at a speed of twelve to thirteen knots per hour. Her length is five hundred and eighteen feet, and her breadth sixty-three feet. When deep-loaded she draws about twenty-nine feet of water. An exceedingly powerful and handsome ship, she is a standing proof (if any be needed) that a thoroughly efficient and profitable cargo-carrier need not be disfigured by awkward and unsightly deck appliances, or her hull be constructed on swollen and unshapely lines.

But the seekers after industrial economy at sea are apparently convinced that any striving towards good looks is, in a cargo ship, an unprofitable reverence to powerless gods. The rapid loading and discharge of cargo is certainly an essential requirement in a ship of this class, but I would not agree that this can only be obtained by the provision of every awkward-looking contraption in the dockyard. In the appearance of their upper-works, many of the later cargo liners resemble the stagings of a shipyard rather than the spare and weatherly fittings of a sea-going ship. Twin masts that soon work into an ungainly rake inboard; gantries that look like the unfinished structures of a bridge-builder; "samson posts," standing stiffly upright and unstayed; derricks, stowed at awkward angles to the centre-line of the ship. These are the features of ultra-modern vessels of this class, and the "full," swollen contours of their hulls seem to lie uneasily in the water under such a cumbersome top-hamper. With this last, the build of the ship, the sailor is not perhaps competent to do more than "note his protest," but he is surely within his right in demanding a less factory-like arrangement of the masts and spars he works under. It is to avoid factory conditions that most of us have fled to sea, and if we are to be pursued beyond the ten-fathom line by this nightmare structure and dissymmetry, there is no telling what may happen. There is an opportunity here for a clever designer (and I admit that his task is great) to employ his talents in devising simpler and more shipshape appliances: by this, he would earn our profound and permanent regard.

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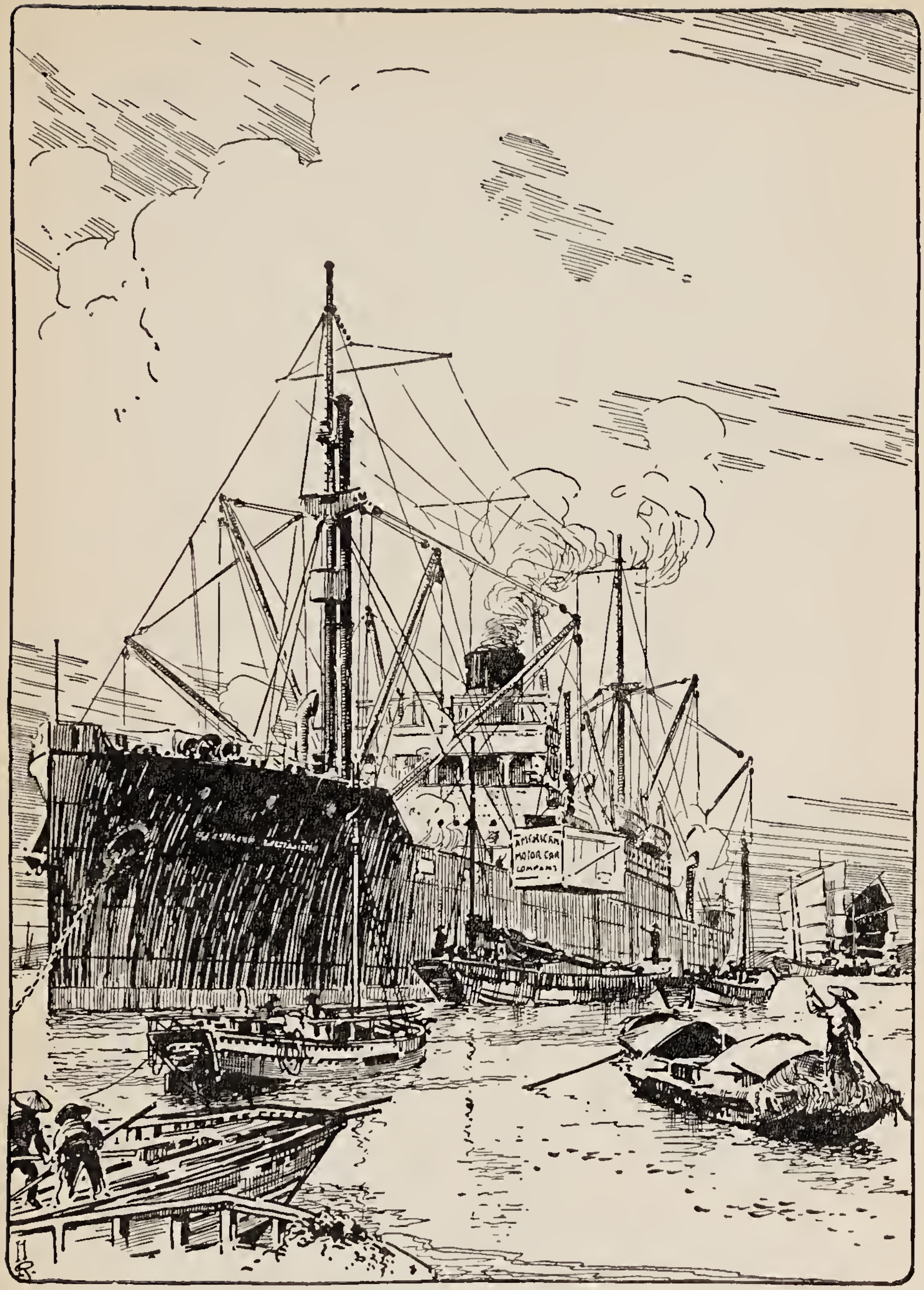
When the ship is in harbour, no official lookout is kept on the round of the horizon even if, as in certain ports, it lies within view. We are legally at rest. We are entitled to special consideration from all moving vessels; it is their business to keep lookout. Only when at anchor and fog sets in do we put a hand to the clapper of the bell and advertise our presence to incoming strangers. Still we are far from being idle in these days when we come to port and our anchor is down or we are held to the quay by stout hawsers. The crew is ever busily employed on the many duties incidental to the handling of the cargo or the care of the ship. But the whilom lookoutman is surely allowed to seek relief from prosaic deck-work by an occasional glance over the bulwarks at the vessels in dock or, out abroad, at the busy panorama and changeful activities of the waterside.

Of all fine harbours, the port of Shanghai is perhaps the most distracting to a working seaman; it is little to be wondered at that his interest in the task of the day is somewhat difficult to maintain when, right overside, there is so much for him to survey. The staring eyes painted on the bows of the junks and sampans that crowd alongside the ship (" S'pose no got eye, how can see? S'pose no can see, how can go? ") are no wider than his own when he scans the strange vista of the river and the endless stream of curious traffic that passes up and down. The muddy outpour of the Wu-sung sprouts a thousand bamboo masts under his eyes, and the swift flow of the river is continually massing and detaching the quaint native craft in manœuvres of quick and varied formation. He sees the huge steel hulls of the ocean steamships towering above the small harbour vessels and looking odd in such an eastern setting of brown junk-rig sails, bamboo spars, wicker bulwarks, matted deck-huts, and carven peaked sterns. The busy oper—— "*Now then, you! Get on with th' job, there!*" roars the bos'un, and it is perhaps time the dallying seaman picks up his hammer and returns to the task. (But no hard-case "boss" can rob him of an impression, nor can the years dim it.)

Tap, tap, tap—tip, tip, tip, tap, go the chipping hammers (sailor work, nowadays), and the seaman is left to ponder this treasure of the eye while attending to a square of the rusty steel deck. But when a deep-throated steam whistle sounds from beyond the bend, he finds his feet again, and looks downstream to see what ship comes in. The broad surface of the river has suddenly grown a new flotilla of small craft. Darting out from creek and inlet, a swarm of tiny sampans—the water "taxis" of eastern harbours—are racing out to where a big cargo ship is slowly coming in from sea. A stirring regatta! The brown-skinned Chinese boatmen handle their frail shallops in the dangerous run of the current with amazing skill, and ply hands and arms, feet even, in their efforts to be first in the quest for profitable employment in service of the new arrival. But it is not the activity of the sampan men that holds the sailor's eye. Nor is it the outline of the steamship, one differing in little from the general design of a seaworthy cargo-carrier, that causes him to drop the chipping hammer and step over to the rail for a better view. He is interested in a new splash of colour that floats over the stern of the ship—the Stars and Stripes—that for years has been but rarely seen on the high seas or in ports abroad since the fine clippers out of Boston and Salem, Bath and New York went out of commission. As he stands at the rail, watching this western trader haul in to a discharging berth on the bank of the river, the seaman (who is perhaps grey at the temples) may recall a snatch of an old sea song. Certainly, we were no great rhymesters in the days of sail, but we made efforts to preserve the spirit and colour of an occasion in our hauling "chanteys."

There's a Yan-kee ship comin' down th' river,
Blow, boy-es, blow!
An' Stars an' Stripes, they flies abov'er,
Blow, boys: bully boys, blow!

She is a steamship of about six thousand tons, this incomer who has caused such a stir among the sampan men, and is representative of the many fine cargo vessels built in the United States during or immediately after the war. She is included in this cargo liner class more by reason of her superior appointments than by virtue of her special employment. Her length is four hundred and ten feet, and her breadth fifty-four. Geared turbines, capable of driving her at a modest but economical speed



AMERICAN CARGO SHIP

Plate 10

of nine or ten knots per hour, are fitted in her, and she burns oil fuel to generate steam. She compares very favourably with the best class of cargo vessel built in the United Kingdom, and is perhaps more lavishly equipped in respect of her general appointments, and, in particular, in the extent and comfort of crew accommodation, than is usual in a ship of her class.

The laying down of the great emergency fleet, of which this cargo vessel is a handsome unit, was a new adventure for Uncle Sam. For years he had been lying on his oars, content to let other nations do his "trucking." In competition with the cheaper workmanship, cheaper materials, cheaper manning, of other maritime nations, he could see little or no profit in an adventure on the deep. Came the war, and the perspective of his vision altered rudely. The film of "profit and loss" dissolved, showing the ships as one of the great material assets of a nation. The cry was for ships, for ships at any price! Much can be done when

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costs are in the clouds, when all considerations of profit are blown over the horizon before the blast of war. The tremendous augmentation of American tonnage that astonished the world and did so much to end the war came when Uncle Sam put aside his "landward" toys and commenced to ply the oar again.

A BRITISH TRAMP STEAMER

Plate II

Chapter 6: *Tramp Steamers*

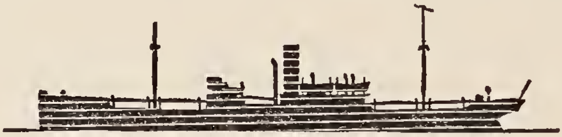
THE maritime importance of a nation in the ways of commerce is not wholly measured by the numbers and tonnage of fast and luxurious steamships possessed, but rather by the countless smaller and perhaps unimposing vessels that carry its national flag to remote places. The tramp steamer does this. She it is who makes the country she represents an ever-present figure to the sea-board population of distant lands. By her performance no less than by the quality of her crew is the measure taken of her country's commercial interests. In this respect, very little escapes the notice of water-side observers. The size, power, and speed of a new-comer to the port becomes an important topic for a day or two, then interest centres on the manner of her unloading and the condition of the cargo she delivers. Anon, she loads for the return voyage, and the critics have an opportunity to note the ingenuity of the ship's designer who has produced a vessel capable of carrying a greater cargo than another of the same dimensions. "A wonderful ship, . . . a great people," they may say, as this latest specimen of national maritime industry sets off to sea again.

Tramp steamers are popularly supposed to drift around the seaports of the world looking for an opportunity to load a cargo. The system of their employment is not quite as simply happy as that; cargoes are rarely to be found lying about, haphazard on the beach, awaiting transport. Arrangements have to be made for months, years sometimes, in advance. A whole series of voyages must often be projected by the prudent owner, whose knowledge of shipping must be equalled by his familiarity with the crops and seasons of the world. It would be of little use to send *Stella Maris* out to, say, Kratchadatch, however profitable the immediate freight might be, if the prospects of her loading a cargo at that port (" on the sea coast of Bohemia ") were remote. We could not afford to keep our steamer idle until the seed be sown and the crops garnered. So, we must keep an eye on the seasons and note when the granaries at Kratchadatch are well stored with grain for export. But other owners of tramp steamers are watching the crop reports as closely as we are. The season comes. Alas! The outward freight to Kratchadatch has fallen away to a level at which there is little or no profit, so many are the owners who know all about that grain out there. Something must be done. *Stella Maris* has arrived in a home port: in a week she will be unloaded and all ready for a new voyage. . . .

We put on our hat, and go down to the floor of the Exchange, where shipping men forgather. (For purposes of this chapter, we cannot afford to employ a broker.)

Everybody we meet seems to have a steamer ready for a voyage, and all are offering for Kratchadatch. The clamour for cargo to take there is great; there is little forward. We meet a broker who speaks of, say, Cossulis. (Be it noted that our place-names are fictitious.) He has coal to deliver out there, a full cargo that would suit *Stella Maris*. . . . "Cossulis to Kratchadatch? Six hundred odd miles; three days steaming at nine knots. A trip in ballast, expensive to us. *M-mm!*" Still, it is the best that offers in a stagnant market. We figure out the time of the outward voyage. Fifteen days to Cossulis, twelve days to discharge there (a poor place, anyway) and five to reach Kratchadatch in readiness to load. Say, thirty-two days. Our steamer could be ready to take up a cargo at the mole at Kratchadatch in five weeks. What offers there? Another broker is found, acting for grain merchants who have made a purchase: a cargo will be ready for shipment at about the time of our ship's projected arrival. *Stella Maris* is then fixed, in two charter-parties (or contracts), to load coal at Barry Docks for Cossulis, and to take on grain at Kratchadatch for transport to certain stated ports in the United Kingdom. The voyage between Cossulis and the grain port is to be made in ballast (lacking cargo) on owner's account.

Having fixed *Stella Maris* for a round voyage, we might have a look at her as she lies in the Hornby Dock at Liverpool. She is comparatively modern in type and should stand as an average tramp of to-day. Her tonnage is five thousand tons, gross, and she can carry a total deadweight of nearly eight thousand tons. She is four hundred feet in length, and her beam is fifty feet. Her speed is nine knots when loaded to her marks, and perhaps ten or over when in ballast trim.



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She is in from Bombay with a cargo of Indian products, and the long shed at which she is berthed is piled high with the bulk of the merchandise she has brought from overseas. (It seems impossible to reconcile such a huge load with the apparent size of the carrier at the berth.) Raw cotton, in tightly-pressed bales, seems to form the major part of the stacks, but hides, castor and mowrah seeds, ground-nuts, oil-cake, and gunnies lie about in considerable quantities. The discharge of cargo is almost completed, and already the longshoremen are unreeving the ropes and dismantling the gear with which they have unloaded her.

It is difficult to form an impression of the ship as we see her from the narrow passage of the dock-side. She stands too high above us to show more than the long strakes of plating that round abruptly into a somewhat " full " bow, but the strong riveting of her topsides is some evidence of sturdy and assertive character. She has no great regard for appearances. Her bower anchor is crusted here and there with the shell and coral deposit of her last anchorage (that may have been over the Israelites' crossing in the Red Sea), and her hull is well rusted on the waterline, offering clear evidence of the strength of the monsoon in the Arabian Sea. Certainly she is no beauty, with the filth of a week's harbour refuse streaming down from the scuppers and the leavings of the cargo plastered in the wake of the hatchways. We may as well show you all her shortcomings here at the dock, for we propose to go to sea in her; and, out there, it is easy to forget the litter of the dock-side and the mean influences of harbour work.

Upon going on board, we find the decks in the same disorder that prevails on the quay. If we look for the " spit and polish " of passenger ships, assuredly we shall look in vain, for the crew was paid off immediately on her arrival from abroad and the ship has been for a week in the hands of the longshoremen. The mate, who had her decks in the best of trim when she came in from sea, has long since turned his palms up at an impossible situation. Perhaps he and the other officers standing by the ship have striven for a day or two to keep things straight, but now the most they can do is to see that she suffers no damage. The gangs employed to discharge the cargo are only concerned to get it on the quay. Anything that hinders a " job o' work " is thrown aside for others to attend to. Hatch beams, tarpaulins, chain slings, and other miscellaneous gear make our progress difficult as we pass along. Dunnage wood and cargo-mats that have been used to protect the merchandise on the voyage lie strewn about the decks, and ashes from the stokehold (it is, of course, forbidden to throw them overboard as is done at sea) are piled high in an angle of the bulwarks. But to-night she is to put to sea again, and an attempt is being made to clear the decks. A new crew has been signed on for the voyage, eight hands on deck and ten in the stokehold, and they are mournfully engaged. It is the habit of the sea that the most depressing work should be incidental to departure. The voyage begins in an atmosphere of hard tasks that are set by the longshore gangs. While they are comfortably abed or seeking their ease in waterside taverns, the seamen have the uncongenial labour of putting their scamped performance to rights. Not only has the ship to be prepared for sea, but she must be ready to load coal immediately on her arrival at Barry Docks. All the litter of her former voyage must be swept off, mats and dunnage wood bundled and stowed away, holds cleared to the "bare" skin of the ship, on the short thirty-six hours' sea passage to the loading port.

* * * * *

The tide serves at six, and before that time *Stella Maris* is unmoored and, attended by two powerful tugs, makes a slow progress towards the river. Her high side opposing such a surface to the fresh west wind, it is no easy task to keep her in the fairway of the dock. She has little to hold her in the water. Twelve hundred tons of water ballast in her double-bottom tanks is but small weight for a ship whose normal load may be nearly eight thousand tons. At this light draught, barely half of the propeller is immersed and its propelling power is reduced in proportion. So, the tugs swing this way and that in their efforts to keep her from fouling other vessels. At length, they turn her towards the dock gates, and she passes out into the broad of the river, where the services of the tugs are no longer required.

It is perhaps with a sigh of relief the captain rings

" full speed away " to the engineers when (the pilot disembarked) the whole channel lies before him. Sailors say that "a light ship has no conscience." She may dance along with the propeller thrashing the water in a fine steady round, but, come a puff of wind on the beam of her, she goes to leeward like a crab, and all the pull of her half-immersed rudder is unable to keep her to the wind. Sea-room is needed for such a lop-sided course, and *Stella Maris* goes wide of the coast on her way round to the Bristol Channel. She leaves her track well marked upon the water. At daybreak, the crew make haste to clear the refuse off the decks. Old mats, rotted coco-nuts, rolls of sodden coir-yarn, bamboos, all are thrown overboard to go bobbling in the wake. The fine west wind can make sport of them: they may come ashore on the Carnarvon coast, where the boys can set up a loud *haloo* at sight of such foreign raffle on the beach.

The time spent in loading coal is, mercifully, of no long duration. As the empty ships arrive, they take their turn to go under the giant coal-tips, and long lines of loaded railway wagons rumble up with the shipments. From then until the loading is completed the lot of those on board is not enviable. Day and night, the procession of loaded wagons (that seems never to diminish) moves forward to the tip. One wagon is detached and mounts in the hydraulic lift, is tipped at a sharp angle, and its contents are emptied into a chute leading to the vessel's open hatchway. Anon, the wagon takes a level position and mounts again to the higher level of the brow. Disengaged, it goes off with a *r-r-r-rump* over the points to reload at a distant colliery. Coal! Coal! There is no escape from it; the choking dust lies everywhere, there is no getting away from the thunderous rattle of the cobs as they pour into the yawning holds, nor relief from the labour of warping the ship back and forward to suit the trimming of the cargo. Coal! Coal! Eyes, ears, nose, lungs, one surmises, become clogged by the fine permeating dust. Only the sturdy coalmen can stand it. Indeed, they look as if they throve on it. . . . Happily, the feverish haste of loading brings the clean days nearer, and, after five days of such purgatory, *Stella Maris* stands out to sea again on her way to Cossulis in Greece.

She is now a very different ship from the high wall-sided " haystack " that thumped her way round from the Mersey. The sea (as viewed from the navigation bridge) seems to be dangerously near. Although both wind and wave are moderate as compared with the strong breeze that prevailed on her ballast passage, she drives her bow into the swell, and a smother of foam and spindrift washes the coal-dust from her gaunt iron decks. Alongside the water wets her hull and laps on the rim of the Plimsoll mark that indicates the limit to which she may be loaded. Well trimmed and carrying a valuable cargo, she has become responsible for her actions. She steers as a good ship ought to steer, and the steady rhythm of the propeller beats gives promise of a good voyage.

In moderate weather, she makes steady progress to the edge of soundings. There, a strong gale is encountered, and for a day or two she battles with heavy seas in an effort to make a course to the southward. Huge seas sweep over the lower decks and life on board is rendered somewhat difficult, perhaps dangerous. In the labouring ship, things work loose about the decks, despite the care with which they have been lashed and secured. Hatch coverings require attention, and a ventilator smashed by a heavy sea must be made tight to prevent the water finding its way below. All such work is carried on as part of normal duties. Ever, one has to keep an eye on the seas racing up and be ready to jump quickly for handhold when, faltering a little on a crest, the ship's head drives down to meet the next huge comber. Conditions are perhaps harder on the engineers and firemen below. Even though they are sheltered to a degree from the inclement weather, their necessarily continuous labours are made hazardous in the restricted space. The " roll, bowl, and pitch" of *Stella Maris* in such a heavy seaway causes the engines to race and strain as her stern is thrown violently upward or settles deep in the base of a big sea. One moment, the shaft is whirling in excessive revolutions; the next, she slows, and all the power exerted seems barely able to throw the cranks and give the propeller a turn. It is anxious work for the engineer on duty. He dare not leave his post at the throttle valves, where, by skilful anticipation of the movements of the ship, he can do much to avert a breakdown. Matters are equally bad in the stokehold, where the firemen have a task to keep steam. Water from the bilges is washing ankle-deep across the footplates and carries coal and debris from side to side, making foothold on the slippery plates difficult. A big roll comes, and barrows, firing tools, a ton or more of coal, all go thundering to leeward, perhaps taking a fireman on the run and hurling him against the red-hot furnace doors.

But there are compensations for all who have eyes to see. There are few more splendid sights than a seaworthy vessel in a big gale. Viewing it, it is not difficult to understand why sailors speak of their ship as a living, animate creature with a spirit and courage and sentient emotions. Watch how she shudders at that tremendous blow as a solid green sea breaks aboard and thunders in cascade upon the decks. Feel the lift in her when, given the remotest chance to recover, she sidles over a menacing white-crested comber. Almost, one can hear a voice in her say, "*No! Not yet!*" as nothing heavier than a fillip of wind-lashed spray flies over!

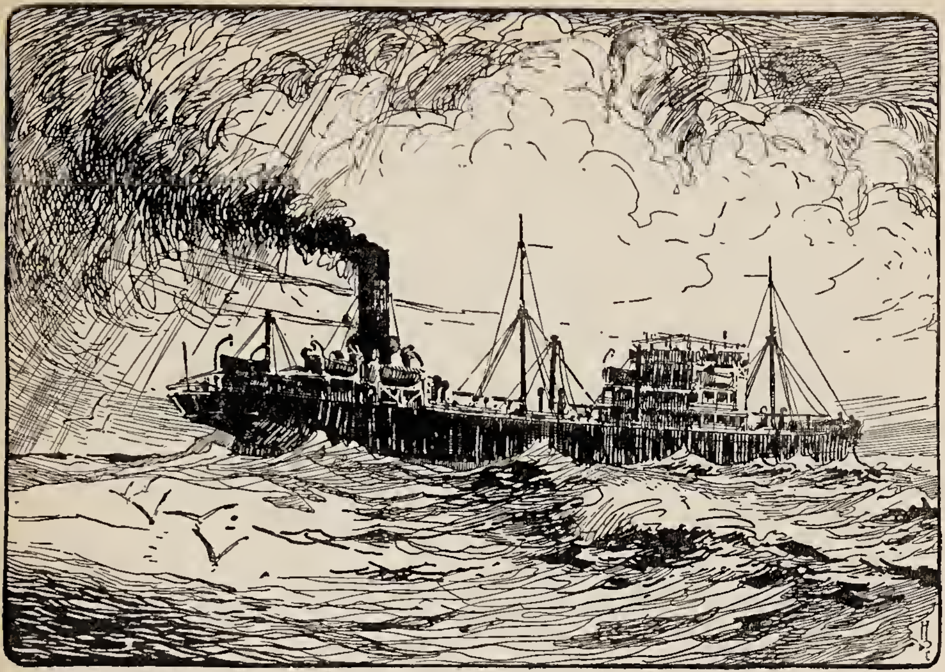
The gale clears, and comes rain, but rain is no hindrance, and *Stella Maris* is enabled to steam south at fair speed. Off Gibraltar, she hoists a string of flags, and Lloyd's signal station at Europa takes note of them and reports her as "all well" to the shipping press. The gates of the Mediterranean being passed, all hands settle down to quiet days of steady progress and shipboard routine. Old Father Neptune, in that big gale, has washed the ship for us, but he has also uncovered many weak spots, and the rust of a working ship has all to be cleared off and a coat of protecting paint applied. Even if we have no great tasks, we have little idle time on our hands, and the days pass quickly until the coast and islands of Greece heave over the horizon.

At Cossulis, we make acquaintance with the "indolent" East. No one seems to be in a hurry for our coal. Other ships are discharging cargo in the open roadstead, and we must await our turn. The captain is growing anxious. That grain charter at Kratchadatch worries him. The two days lost in bad weather outside the channel and the poor steaming due to bad coal (that last load of bunkers must have been the sweepings of the pithead!) have taken up time that cannot be recovered by night-work at the cargo here. Back and forward he goes, interviewing agents and consignees and stevedores. He might as well save his boat-hire (for we are in the land of "to-morrow") and try to cultivate patience by looking at Olympus, 9,000 feet, standing high and distant on our port bow.

"Ram, stam, thunder and grind," go the winches when we do start to discharge. Johnny the Greek is none so indolent when the runners of his wheels are well greased. By promise of a substantial bonus, the stevedore and his men have been induced to exert themselves. The whole scheme of the port has been successful, and the coal goes rattling overside into the barges at a speed that augurs well for our reaching Kratchadatch with time to spare. The captain has now time to look at Olympus, but he seems more contented to turn his gaze downward, down overside towards the barges, and down inboard into the bowels of the ship, where the dust of operations belches in clouds. In time, the shovels of the labourers ring loudly on the bottom plates of the holds and, a day or two later, *Stella Maris*, in high ballast trim again, steams out to take on her grain at Kratchadatch.

* * * * *

Four weeks later, we see a familiar funnel in the lock-gates at Avonmouth. (We have, ourselves, come home overland to serve a purpose.) *Stella Maris* has arrived home again. As owners, we have given her full consideration during the time of her passage from Kratchadatch: we are not to be caught this time with no charter and the ship almost on our hands. In that bundle of letters, that the agent's clerk is passing up the ship's side, are our instructions to the captain. The ship is well fixed. After completing her discharge, she is to take coal to Genoa, then load ore at Almeria for the Clyde. The captain is perhaps moderately well pleased, for, in the interval that we have allowed for dry-docking, he may manage to slip home to see the new baby!



AN "OIL TANKER"

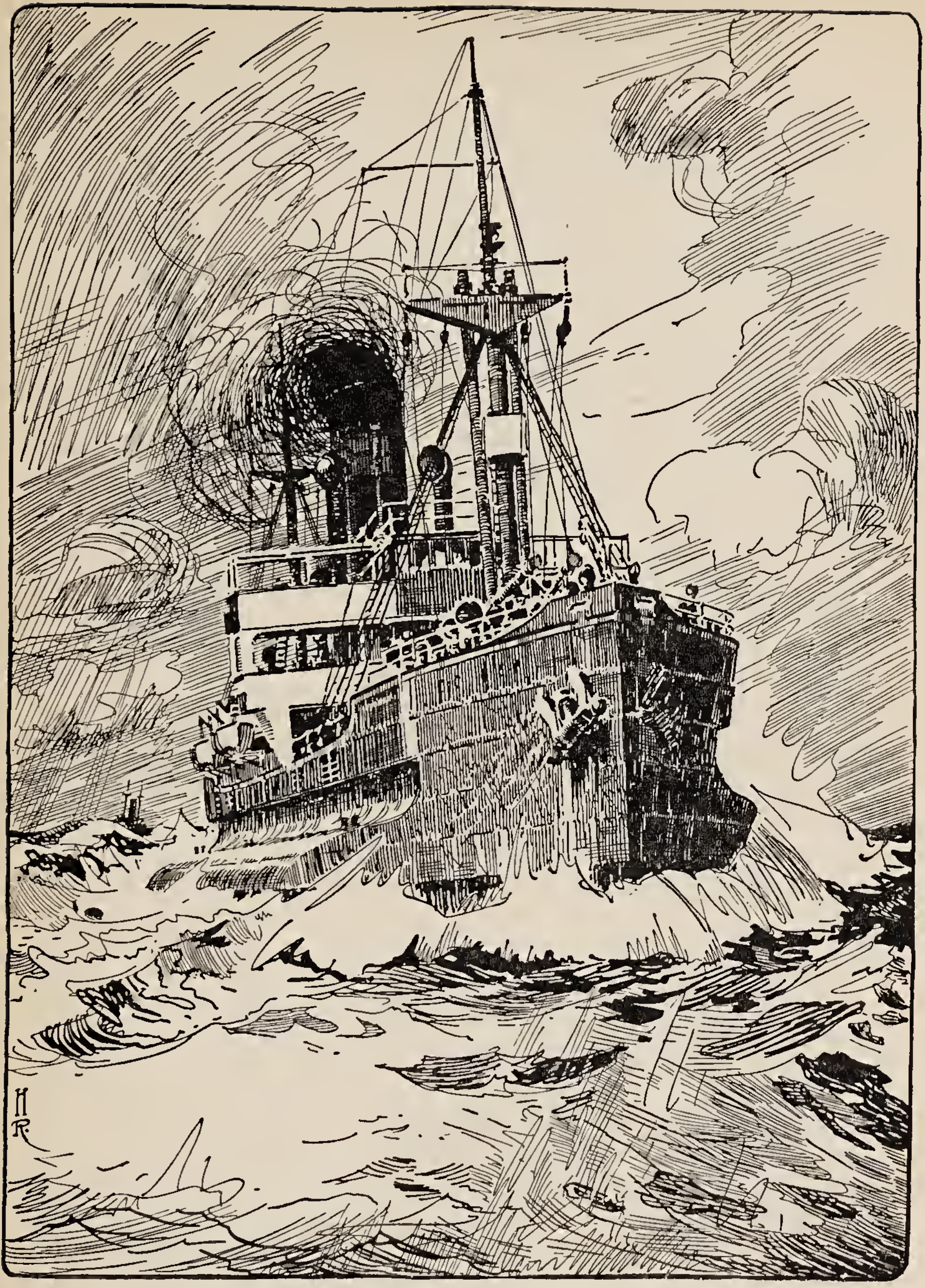
Plate 12

Chapter 7: *Turret Ships and Oil-tankers*

GIVEN clear weather and the horizon standing out like the keen blue blade of a knife, the lookoutman aloft is often able to distinguish a ship at a distance of twenty miles. At first, his attention may be drawn to a section of the sea-line by a faint wisp of smoke trailing in uneven ridges, low down. It dies away, and a casual observer would perhaps dismiss it as a thread of vapoury cirrus mounting into the blue. But the able lookoutman is not so easily convinced that his eye is at fault. Knowing the firing periods of the average stokehold, he allows a few minutes to elapse before gazing again towards that part of the horizon that attracted him. He may have to wait a little, but when a second film of vapour floats up, he puts his hand to the bell lanyard and strikes a firm and unhesitating signal that a stranger is in sight.

But smoke mounts high in calm weather, and he may have a long watch before a vessel heaves over the sea-line. His first impression is of an irregularity in the sharp cut of the encircling horizon: then a pin-point stands out: the masts and funnels of the stranger grow to his eyes, and he scans her with the interest evoked by a chance meeting on the sea. He is not always ready, however, to class her by such a distant view; but there are at least two types of modern steamships that he is able to recognize almost instantly, the "turret ship" and the oil-tanker.

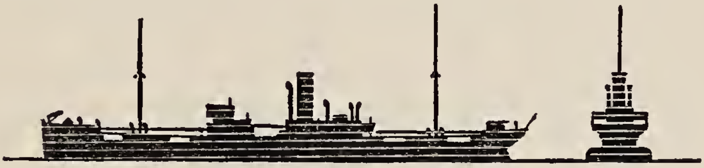
These two ships are bracketed in this chapter, not because there is any similarity in their build, but on account of each having an outline so vastly different from other merchant vessels. In the case of the "turret" ship, all ordinary conceptions of



TURRET STEAMER

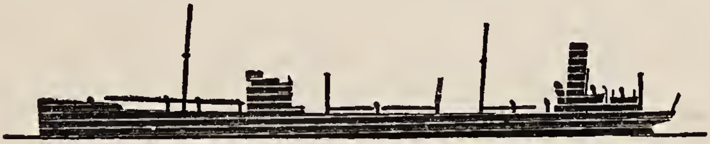
Plate 13

an above-water body are discarded, and the designer has harked back to a period in the "sixties" when iron-ship form was experimental. Viewed from certain angles, she resembles the neck and shoulders of a huge jar.



13.

The "oil-tanker" has no such freakish contour, but her appearance is unique in the illusion of excessive length she presents to an observer. She has been described as an ocean dachshund, but the onlooker who views her from ahead—noting her powerful beam—would be more inclined to dub her a sea bulldog.



12.

A sailor's likes and dislikes are curiously inconsistent. He denies with great heat that he is attached to old ways and old ships, but it is a fact that he eyes each novel appliance and most new types of vessels with little enthusiasm. He may boast of serving electric capstans and "being shipmates" with gyro compasses and wireless direction-finders, but give him half a chance to gossip, and watch his pride when he tells you that his last ship was built in 1895 and is still going strongly! Perhaps it is because he knows the sea to be a dangerous proving-ground for theories, that he reserves his enthusiasm for the seaworthy type of vessel he has tried and found good. Most seamen are partial to a good "sheer" in their trusted ships. From early days, this gentle curve in a vessel's deck, an *upward* slope towards the bow and stern, has proved valuable in helping her to ride safely over heavy seas. Whaleboats, lifeboats, trawlers, and fishing craft generally, than which there are no worthier vessels afloat, all have a pronounced sheer, and it is *the* great assistant in their wonderful sea-keeping qualities.

The turret ship has no sheer. The line of her upper deck is so rigidly straight that, indeed, it presents an illusion as of a *downward* slope toward the bow and stern. This may, in some degree, account for our distrust of a vessel that has the distinction of being able to carry a larger cargo than most others of her tonnage. Then again, it is possible that our antipathy is aroused by the peculiar circumstances of her birth. She follows on no line of legitimate succession. She owes her conception in a great measure to the loose wording of the toll schedules of the Suez Canal. In these, the dues to be paid for a passage through the Canal are based upon certain measurements for tonnage in the calculation of which the turret type of ship secures an advantageous rate over that of an ordinary cargo-carrier. It is as well that she has this advantage, for she has not many others to commend her to the respect of seafaring men. To be quite fair, however, to the clever designers of this type, I must admit that I have known many officers who have sailed in these ships and I have heard very few abuse them. But certain late disasters have apparently convinced both builders and owners that the turret is not all that a worthy sea-going vessel should be, and such ships are not now being constructed.

There is little difficulty in recognizing her. Perhaps one might hesitate for a moment when she is seen as a broadside view, for then the bulge in the hull is not fully evident, but the peculiar straight line of the deck is unmistakable. Seen when approaching bow on, she presents to the eye an extraordinary spectacle as of a giant bottle under steam. Her uppermost deck, on which her crew is housed, is high and perhaps somewhat narrow as compared with the breadth of an ordinary vessel. Only the navigation bridge is carried to the full beam of the ship, and it looks bare and forlorn, extended as it is beyond the line of all other deck erections. The ship's lifeboats are fitted with an unusual type of davit: it resembles the jib of a tripod crane, and has a sufficient radius to lift the boats clear of the bulge and place them in the water beyond. Below the line of the upper deck, her sides drop straight down for eight or ten feet, and then swell out to meet the contour of the main hull. The upper side of the bulge is aptly termed the harbour deck. Certainly, one could only walk in safety on this bare steel shelf when the ship is in port or in the very finest of weather at sea. Most of the vessels of the turret type are serving in the eastern and Indian trades, and the clement weather of this employment is reflected in the well-kept appearance they present.

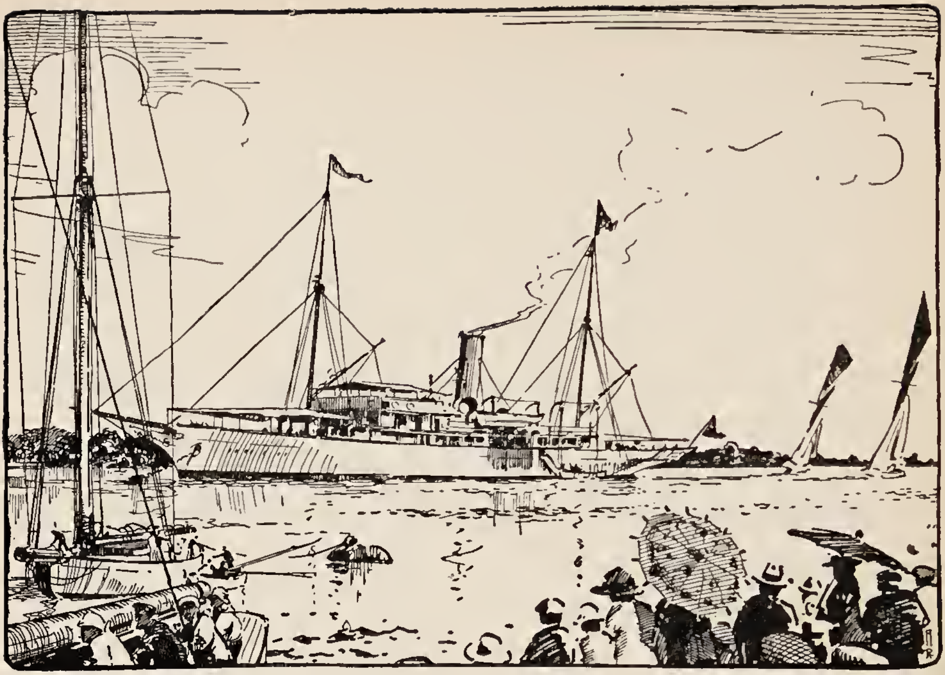
The " oil-tanker " is equally distinctive in appearance, but she occupies a vastly different place in the seaman's regard. With but few exceptions, she is a very able vessel and has fine seaworthy qualities. She is probably the nearest approach to the unsinkable ship that has yet been conceived by the naval architect, and in her he has designed a ship that combines great stability and power, excellent speed, and ease of manœuvre, with a capacity to carry a large burden. Her purpose being to transport only one class of cargo, his calculations and plans are not involved and restricted by the many conflicting requirements of a general trade. But there are other and very special needs that he must consider, notably the provisions for confining safely and securely the mobile and volatile cargoes of fluid oils and spirit. This he does by a form of subdivisional construction in which the water- and oil-tight walls add strength to an already substantial and well-modelled hull.

The great strength of the "oil-tanker" was made very plain to us during the war. A determined and skilfully planned effort was made by the enemy specially to destroy oil-carriers (oil and spirit being essential munitions of war), but few tankers other than those laden with highly explosive oils were prevented from reaching port. Torpedoed they might be, but the damage to which any ordinary ship would have succumbed did little more than reduce their speed. 'Listed perhaps, and settling deep in the water, they were yet able to limp into port where the damage could be repaired. When transporting highly explosive spirit, such as petrol and benzol, they were not so fortunate. The impact of a torpedo was often sufficient to set up an instant blaze that brought death to all on board but not always to the ship. Cases are on record of an oil-tanker being salved and brought into port after she had burnt out at sea. On other occasions it took many rounds in heavy gunfire of our own naval ships to sink what had become a blazing menace to the traffic in the channels.

Seen at almost any angle, the tanker presents an appearance of extreme length in relation to the height of the hull above water. While many of the larger vessels (particularly those of American build) do possess this great length, the impression of elongation is largely an illusion conveyed to the eye by the preponderance of horizontal lines and the weakness of the few uprights. Long strakes of plating, long lengths of pipe-lines carried from end to end, a long spidery gangway that extends from stem to stern, are set against the short and unimportant masts, while the funnel (standing up in solitary state at the stern) loses any prominence that it would have in a mid-ship position. In general, the proportions of length to breadth in the average oil-carrier are much the same as those of general trade vessels of her tonnage, but the absence of the customary range of decks gives her a lean and emaciated look. She is anything but that. If there is one plump, well-nourished craft at sea, it is the tanker. Her wide steel deck, studded by compact strongly-built hatchways leading to the separate compartments, is essentially one of substantial character. Every fitting set upon it is of the very strongest and most enduring make, for not only have they to withstand the curl and lash of heavy seas, but they must also stand to the great strains of a liquid and mobile body within. The engines and boilers are placed in the water-tight compartment nearest to the stern, and the bulkhead between this section and the oil-carrying tanks is well insulated against any miscarriage of fumes.

Life on board the oil ships is, necessarily, much more closely controlled than in the ordinary cargo-carrier. The danger of fire, being ever present, is closely guarded against, and regulations are enforced very strictly. But this regimented life aboard ship has compensations. The accommodation provided for the crew is usually much better than in ships where greater licence is permitted. The standard of food and living in general is excellent —with the natural result that these ships attract the best class of seamen to their service.

A notable feature is the great distance that separates the living quarters of the various sections of the crew. The seamen and firemen are housed forward, the navigating officers amidships, and the engineer officers right aft beside their engines. This disposition has given rise to a rumour that the seamen in an oil-tanker make faster voyages than their officers. I have heard the navigators say to the engineers that they " will report them *all well* " on arrival in port!



A STEAM YACHT AT ANCHOR

Plate 14

Chapter 8: *Steam Yachts and Cross-Channel Express Steamers*

BOTH are equally beautiful, but while the steam yacht appears gracefully calm and dignified, the cross-channel express steamer looks eager and purposeful as though she were constantly chafing at some restraint or suppression of her power and speed.

It is not easy to find an adequate excuse for including such a private vessel as a steam yacht in a book of commercial steamship types. Perhaps the most reasonable plea is that she represents an ideal, the culmination of centuries of effort in ship design, with all considerations of profitable employment set aside. She carries no cargo, and so the many devices and appliances required for the handling of merchandise are not necessary. She needs no great quantity of fuel for her infrequent sea voyages; bunkers, hatchways and hoists are reduced to a trim minimum, and there are no unsightly coaling ports on her smooth, unbroken sides. Labour-saving appliances (that are rarely designed with any regard to appearances) have no place in her, for indeed the ingenuity of the officers must be taxed to the uttermost to employ the comparatively large numbers of her crew. In her is opportunity afforded for a magnificent display of the ship-builder's art and of the seaman's craftsmanship in preserving such a fine model.

She has practically every quality that sailormen desire in a ship. Her lines are as simple and seakindly as the taut skin of the dolphin. Sheer? It is unnecessary to follow the line of gilt moulding that emphasizes the sweet and gentle curve of the deck-line, for, in one swift glance, the eye has already accepted it as the only satisfying deviation from the straight plane of the water. But one may linger to observe the growth of this well-defined ribbon as it flows from under the scrollwork of the figure-head. In it there is neither break nor waver until it vanishes in the long and shapely counter. The design of the bow is equally fine. The clipper cut-water of the square-rigged sailing ship (but slightly exaggerated) is taken as a model and, in many cases, bowsprit and graceful figure-head have also been adopted. The curve of this beautiful entrance into the water arouses even a hardened steamship-sailor's admiration. It shows the art of the ship-builder in the most difficult of his many intricate tasks, that of merging the relatively flat plates of the side into the concave flare of the bows.

14.

A sailor's enthusiasm for such a beautiful vessel may be pardoned, but he must now come to admit that in character steam yachts are somewhat colourless. The calm dignity with which they set out the natural beauties of a harbour is perhaps irritating to those of us who admire performance in a ship.

They are too domestic, these laced and powdered darlings. They represent an aristocracy in ships, one that has become indolent and unduly proud, caring for little but the preservation of a fine pose, a graceful and patrician gesture. While one is grateful to the fortunate owner for his fine taste in preserving such a beautiful model, one would like to see him take her to sea more frequently. It is an ignoble fate for such a ship to lie swinging the tides in even the finest of harbours. . . . But the same steam yacht was not always as bloodless and lifeless as that. Perhaps, as she lies drowsing the tides away, she may brood over the active days of her war service when she was roughed in a coat of iron-grey and mounted guns. We knew her then as an active ship, one capable of offence and defence in the submarine-haunted sea lanes. We have long memories at sea, and for her assistance as a keen-sighted patrol and a gallant escort in those stirring days, we dip our ensigns to the steam yacht when we meet her abroad.

* * * * *

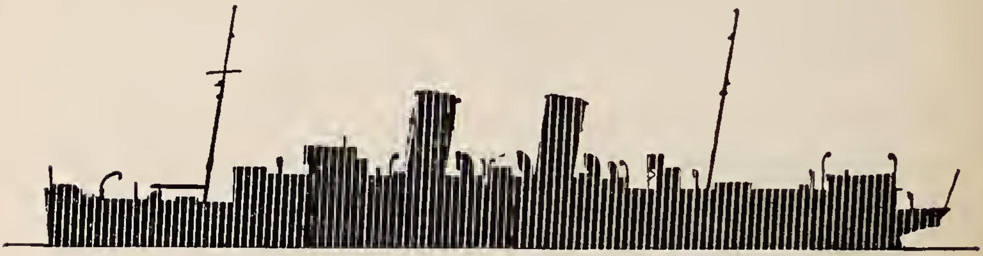
In coastal navigation, the character of a point of land and the deeps or shallows in its vicinity are often sufficiently related to guide the seaman in his estimate of the distance at which it is safe for a deep-draught vessel to pass. A long low neck (generally of a sandy or shingly nature) has to be rounded with caution, for the configuration of the sea-bottom is usually an extension of the slope at which the shore takes to the water. Such an arm of the land is mean in character, unimposing, and possessing little natural beauty. But an honest headland, whose sheer bluff face (wrinkled kindly by verdant scraps and ledges) gives an indication of ample depth of water at its base, is a fine object on the sea-line, and one may stand close in for a last near view of the coast. Bound out, and rounding the bare islets of the Skerries group, the high crown of Holyhead with the South Stack laving its feet at the water's edge appears on the port bow, and the course is altered to pass close under the shadow of Pen-gybwyn. The harbour and the town beyond open out to the view, and the lookoutman, sighting a lean black hull moving swiftly towards the end of the breakwater, strikes two bells for a vessel on the port bow. She bears round the harbour lighthouse at great speed and heads straight out to where the low blue line of the Irish land is faintly visible.

On this, a crossing course, she is the "giving way" vessel under the rule of the road at sea. ("*When two steam-vessels are crossing, so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way of the other.*" Article 19.) . . . But the lookoutman and the officer of the watch are unconcerned at the apparent recklessness of the stranger in steering to pass ahead, for they have recognized her as the *Anglia* of the Holyhead-Dublin mail service and know that she has speed enough to go back for another bag o' mail, and then go ahead and across.

If the steam yacht is not specially noted for a serious performance, we have a sufficiently active service in the cross-channel express steamer to make up for the *quasi*-idleness of her beautiful and reposeful sister. She is a nervous and volable ship that, even at the dock or pier, gives one an impression of quick, untiring vitality. An eager vessel, trim, responding alertly to the great demands made upon her power; a creature to be humoured in her swift lancing of the short and often vicious coastwise seas.

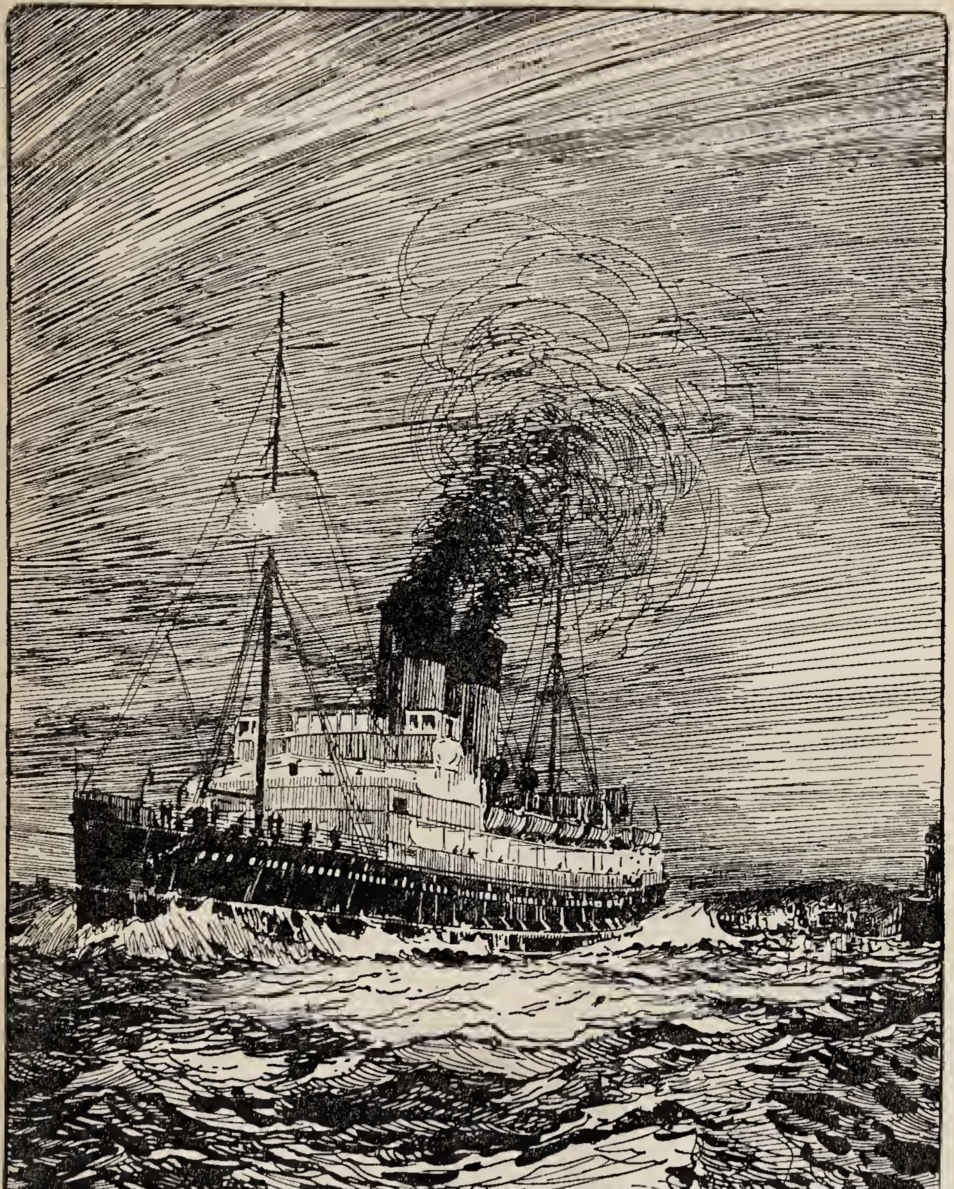
She is not inferior to the steam yacht in beauty of line. Perhaps her mould is a trifle harder than the delicate model of the pleasure ship, but I am inclined to think that this is an illusion due to the sober black of her hull as contrasted with the ivory tint of the yacht. Unlike the latter, she owes little or nothing of her graceful form to the sailing ship. She is purely "steamship" in every detail of her construction. Although I have qualms in trespassing upon the grounds of competitive claims to distinction in naval architecture, I cannot resist the opportunity to offer a sailor's tribute to the Dennys of Dumbarton as the builders of such a perfect example of a pure-bred steamship.

The *Anglia* is three hundred and eighty feet in length and forty-five feet broad. Her tonnage is three thousand and fifty-three tons. To my eyes, she is the most beautiful mercantile steamship afloat. In this judgment, I admit that her comprehensive size has influenced me. Her whole length and the structure and arrangement of her upperworks can be comprised and contained in a survey that would be "out of focus" when expended on the gigantic hull of a greater liner. Her masts and funnels are spaced apart at distances that are proportionate to the height of the hull above water (a becoming arrangement that is rarely possible in the very large vessels) and she has no multiple range of decks and vertical erections to confuse the vision by a checked and serrated perspective.



15.

The sheer of this cross-channel flyer is not perhaps as pronounced as that of the steam yacht. A considerable sheer would, in her special case, be a deterrent rather than a help. High speed being her

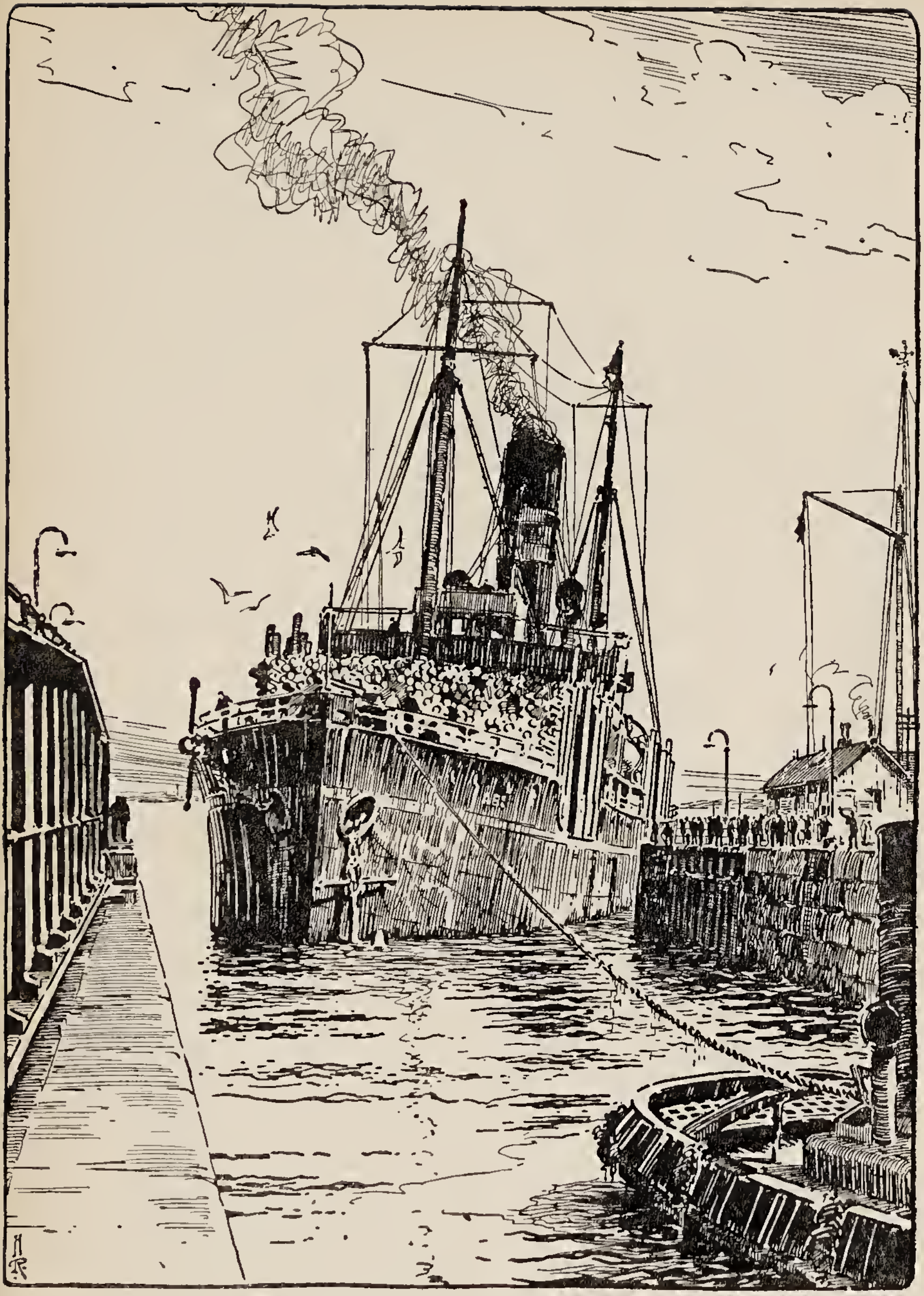


THE CROSS-CHANNEL EXPRESS LEAVING HOLYHEAD

Plate 15

great feature, she is designed to cut through rather than ride over the waves. She is especially strengthened to withstand such harsh treatment, but—so skilfully has the builder effected this—no outward sign of the resistant structure mars the fine contour of her plating. It is at the ends, the bow and stern, that her character for speed and seaworthy qualities is most understandably expressed. The keen and long-extended wedge of the bow is manifestly one to cleave easily but inexorably into the sea and afford a clear opening for the passage of her forty-five-feet beam; the clean sweeping " run " (the tapered stern section) is obviously devised to prevent any undue retardation of the ship by the abrupt closure of the broken water. As is so frequently the case in ship design, the adequate and highly serviceable models are the most beautiful. From that point in her straight stem that cuts into the water, the steel plating of the bows grows outward in a curve that rivals the feathers of fine spray caressing it, while the symmetry of the modelling of the stern is comparable in beauty of form to the scroll-piece of a violin.

Practically all these express steamers belong to the railway companies or to services in conjunction with the rail systems. They are constructed to link up with train schedules that set out the time as 11.59 a.m., and they are almost as punctual in their movements as the rail-bound locomotive. Weather is rarely a hindrance to them; only fog confuses their time-table, and even that not greatly. In these days of close familiarity with so many remarkable developments, the wonderful performance of this high-speed " ferry " is accepted as a matter of course. Perhaps we have no time to wonder as we step from a rail carriage to the pier, pace a few yards to the waiting mail-boat, board her, and then shoot out into the channel at a speed of twenty-five knots.



A NORWEGIAN TIMBER-CARRIER

Plate 16

Chapter 9: *Coasters and Short-sea Traders*

THE ocean-going steamship is compelled, by reason of her deep draught of water, to frequent docks and wharves that are usually situated remote from the busy centres of a city. Perhaps this seclusion has promoted a habit of reserve: she is not often seen in the days of her stay in port. Acquaintance with the great vessels in a state of preparation for a voyage is not encouraged by their guardians, the dock and shipping authorities. They prefer to present their charges *en grande tenue* in the river or at the Landing Stage, with the " blue peter " at the fore and a feather of white steam curling at the funnel pipes. The intimate details of a liner's toilet are rarely attended to in public; one has to traverse dingy dock streets and tramp through the litter of the sheds to see the operations that lead up to the brilliant spectacle at the embarkation stage.

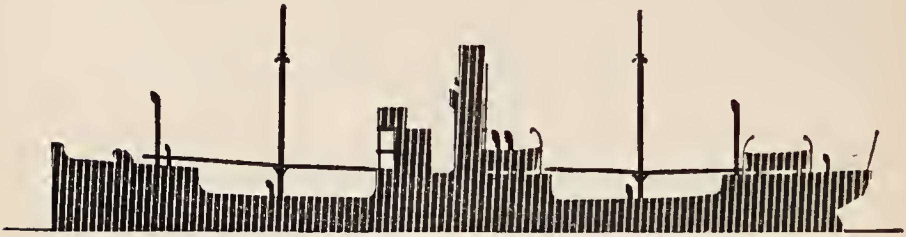
The coaster and the short-sea trader (while modest above all) are less concerned to maintain an atmosphere of privacy. Their annual overhaul, that is usually done in winter time at a shipyard slip, is a sufficient preparation for many months of service;

the few hours of their stay in port can afford little more than time for a wash-down when coaling operations are completed. As for loading and discharging cargo, there is no reason why they should conceal such evidence of their industry. Berthed up-river at wharves and docks that the deep-water shipping has long since found too small for its increasing tonnage, the coasting vessels carry on their operations in full view and afford open entertainment for passing citizens. Travellers and loungers on the bridges, pausing at sight of the ships below, may lean on the parapet and indulge romantic fancies of adventure and far voyaging. The material for dreams is there in simple happenings: barefooted seamen swabbing a deck, the swing of crates and boxes at the derrick ends—even the steward and his mate heading up the empties to " return to store."

They are friendly little ships, unpretentious and hard-working (but " little " should be read as an affectionate diminutive, for many of the larger Continental traders have more than the tonnage of an early Atlantic liner). In size, they range from one to fourteen hundred tons, a grouping that embraces a greater variety of special types than any other division into which I have classed the ships. In an earlier chapter, I remarked that the emphasis of tonnage loses much of its apparent value when exceeding the huge bulk of twenty-five thousand tons. The reverse is the rule when we come to look at ships of under two thousand tons. Proportions, in the relation of mast and funnel to length and breadth, are difficult to preserve when working conditions impose a limit in space. In ships of a few hundred tons, the figure of a seaman on the decks is sufficient to set a known standard for comparison.

Sailors term the waters of the North Sea, the Baltic, and the Channels, the "short-seas," as distinct from the long ridges of the oceans. There is no suggestion of light seas and calmer waters in the term, for nowhere is the weather more furious and bitter than around these coasts in winter. They must needs be sturdy ships, these short-sea traders, and the men who handle them have little to learn from any seamen in the world. Included in this class are the North Sea timber ships of the Scandinavian ports, manned by as hardy Norsemen as ever sailed from a grey harbour. Carrying a great deckload of pit props, they are rarely seen in the comfortably upright trim that a less difficult cargo makes possible. The voyage across the North Sea is made under conditions that only their case-hardened seamen would sign for, with the decks permanently inclined at a steep slope and movement impeded by the lumber and its heavy lashings.

The "list" (or inclination) of a timber ship is altogether different from the "lean" of a vessel under sail. There is no buoyant lift to the pressure of the wind and the recurrent scend of the sea: the listed steam trader lies down on her side in a deadly and lifeless manner and takes the buffet of a sea without the slightest protesting rise. Sometimes she is seen in the curious and unshiplike position of driving into the seas with a list towards the wind, and broken water curling and breaking on the baulks of her deckload.



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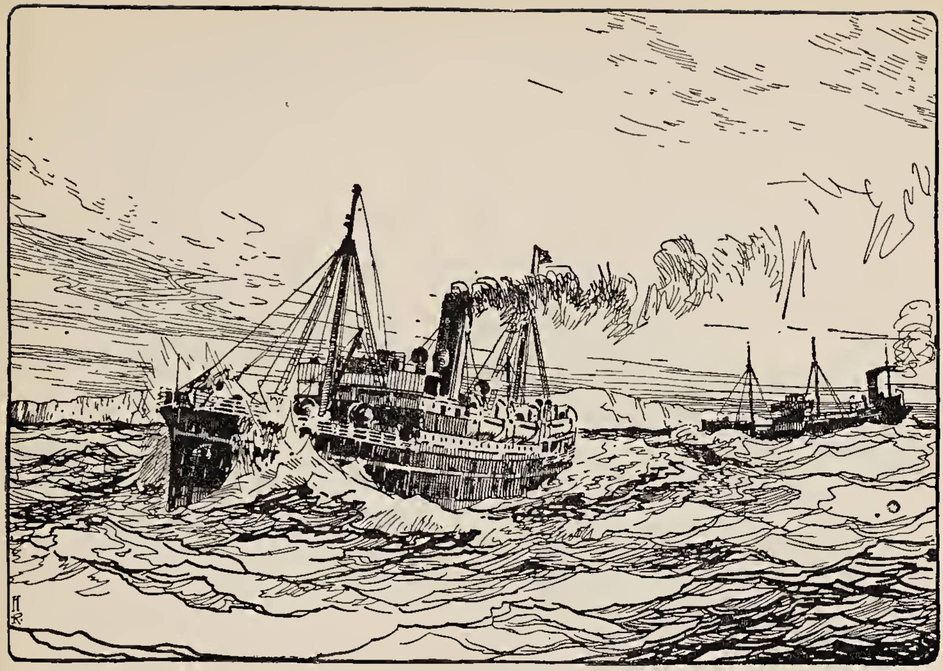
In addition to the swift cross-channel express steamer most of the railway services possess an intermediate type that is an exceedingly powerful and well-equipped vessel. She has two masts and one funnel, the masts somewhat shorter and heavier than one would look for in a well-proportioned ship. (They are probably so fitted for passing under bridges in the upper reaches of the rivers and harbours she frequents.) Considerable cargo capac-



COASTERS

Plate 17

ity is suggested by the full lines of the hull, but these are far from being as swollen as the ordinary cargo-carrier's, for this intermediate coaster has a speed of fourteen knots. In her there is accommodation for a few passengers, but most of the travellers who go in her have four cloven hooves, and the landward smell of penned cattle is the odour in which she sails the seas. Liverpool and Glasgow shipping companies own similar vessels, engaged in the Irish cattle traffic, and the tide-loads of the Mersey and Clyde would seem strange without a number of these fast coasters leading the van.

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The smaller vessels of the coaster class are much too numerous to be dealt with in detail. They range from the three-master "grabber," with her one funnel set nearly at the stern, to the squat "puffer" of about one hundred tons, the latter a diligent little craft as much at home in the calm waters and sylvan locks of the Forth and Clyde Canal as in the wide rough seas of the Irish Channel.

In character, the coaster is a nimble vessel designed for an economical traffic in congested waters; to do her work without such costly harbour aids as tugs and watermen; to dispense with pilotage assistance wherever the custom of the port permits. She is a self-reliant and independent craft, and I could imagine her bucking angrily under any hand but her master's when crossing the bars or canting on the tide in the winding reaches of the smaller ports. With all these deeps and shallows she is familiar, but she is equally at home in the great seaports where, in company of the giants, she seems in no way abashed. Certainly, she has qualities to arouse the envy of deep-water sailors. When the heavy-draught ocean steamships turn out of dock, they fret and squirm under the galling restraint of the hawsers by which they are set fair between the walls of the tidal lock. Canting this way and that, they prove obstinate and full of knavish tricks, and the harassed dockmaster (stepping it on the granite copestones of the pierhead) holds up his hands to high heaven and makes strange vows. Anon, when clear of the pierheads, they are still in evil temper. The business of straightening to the tide and heading out to sea is carried on in a clamour of protesting roars from their syrens and answering blasts from the tugs, while (over all) the rising steam thunders through the exhaust pipes. Almost, in the din and temper of it, the big ships seem unwilling to face the white-capped hurdles beyond the bar.

But dock or lock, river mud or tumbling coastwise sea, are all in the day's work of the little harriers who go the short-sea voyage. Tide-riders they are, taking advantage of every set and slack in the seas they know so well, and they have no time to swing and poise before bending to the race. They snake out of dock in the intervals between the laboured warping of the larger vessels, and set off on their passages with no appearance of hesitant mood in the whirl of brown smoke that they throw to the wind. Each has the air of an alert and confident workman settling to a stiff task, but one which he knows is well within his powers.

The sober procession of deep-water vessels in the channels is enlivened by the brisk manœuvres of the small craft when they depart from dock and wharf and join the outward-bound traffic. While we large oversea traders sit stiffly upright and preserve an even keel, the coasters dip and rise buoyantly in the ground swell and show the red of their underskirts. Many of them, possessing a good turn of speed, are able to cut across our bows and take advantage of the turns in the channel (". . . *every vessel, overtaking any other, shall keep out of the way of the overtaken vessel.*" Article 24). There are few moments in sea-life more humiliating than when a "hooker" no longer than your foredeck and heeling over to the very wash of your bow wave goes forging ahead and gives you a choking whiff of her north-country smoke for remembrance. . . . But the channel leads to open waters, and out there the coaster gets many a wet jacket while we go dry.

When the tongue of the land no longer affords a shelter, the coasters lie over to the pressure of the wind like sailing ships in a breeze of wind. A gale rising and the sea getting up, they flash wet sides towards the light and thrust into the vicious white-capped ridges with a peculiar "shouldering" motion that we deepwatermen (accustomed to long ships) never experience. It is this combination of a lurch and a drive that is the characteristic action of the coaster in open waters. The big ships may "bore" impressively into the base of a head sea, but the aggressive little sea-harrier has no time for such pendulous and graceful curtsies: she "bites" at each rising crest that swells under her forefoot and worries through it in a burst of foam and driven spray.

The seagulls are their familiars, the big grey gulls that (as every one knows) harbour the souls of honest sailormen when they die and go aloft.

" Here comes old Jimmy Proudfoot," one screams to the others as they poise and hover at the bar, searching the face of the waters for stray morsels. . . . " Old Jimmy Proudfoot an' his *Talisman* o' Belfast. A rum old craft as ever was! Lopsided, as usual. Shows that he loaded on th' ebb in th' Liffey. Catch old Jimmy payin' th' stevedores t' stow that there furniture van on th' off-shore side o' th' deck! . . . Come along, boys, let's have a look at her! "

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Swiftly planing, without a stir of feather, the gulls pass and repass the coaster, noting her trim and draught and arguing noisily as to her chances of docking on the tide. They dart through the smoke-ring above the funnel, twitching their feathers to clear the lice, then circle the masts in graceful banking curves and poise without effort over the bridge to survey the man at the wheel with bold, insolent eyes. (Have you ever had a gull stare at you? An appraising and searching inspection. Almost like a bos'un of the old school eyeing a new hand at the gangway.) . . . Anon, *wh-hip,* they go, wheeling and screeching, to investigate the thrash of slops that the cook has emptied overside.

"Getting wuss an' wusser," they scream, fluttering, clawing, dipping in the wake. "Nothin' but potato peelin's an' a lot o' carpenter's truck. Changed days! By the holy hookblock, when we wos sailin' there wos allus a tasty bite 'r two t' throw over at th' bar. We wos never mean like that, even in our time o' cracker 'ash an' salt 'orse!"

Thumping a steady round, the *Talisman* draws in, passes the Bar Lightship, and steers a course through the Queen's Channel on the bi-weekly voyage that has been her business for a score of years. Rounding close, she sets each one of the starboard hand buoys to a friendly becking in the trouble of her wash. The bell-boat at the elbow greets her with a fine musical tolling, but Formby Ship (red-faced and sternly official) roars out a curt demand for her destination—as if every one did not know the "ham and egg" berth in the Prince's Dock. Then again there is a second rude hail from the lightship, and old Jimmy Proudfoot is reminded that his pilot flag, the dingy scrap of two bars, red and white, has not been displayed to show all interested parties that he possesses a licence for navigation in compulsory-pilotage waters. Up it goes, half-way on the halliards above the bridge, and Formby Ship puts down its megaphone and lights another pipe.

The " old man " shoves her through the traffic in the river with a skill and ease that show the confidence existing between him and his ship. Speed is only slackened when he puts the helm over and rounds-to off the dock entrance. The tide has made, and business is brisk at the pierheads, where there are yet a few outward-bound vessels to be passed out of the dock; there seems to be a possibility that *Talisman* may have to wait until after tide-time and " lock-in " on the ebb, a proceeding that the old coasting skipper does not like. He edges the ship in towards the Liverpool shore and holds her in a good position for entry.

The gulls, that have followed her in, seem to have a liking for the old ship and, after a precautionary circling, perch on mast-head and stay for a gossip.

" She's late on the tide this time," says one. " I reckon them salesmen at th' markets 'll be puttin' an extra tuppence on th' pound o' ham, on account o' shortage. . . . Wonder what kep' old Jimmy out till this time? "

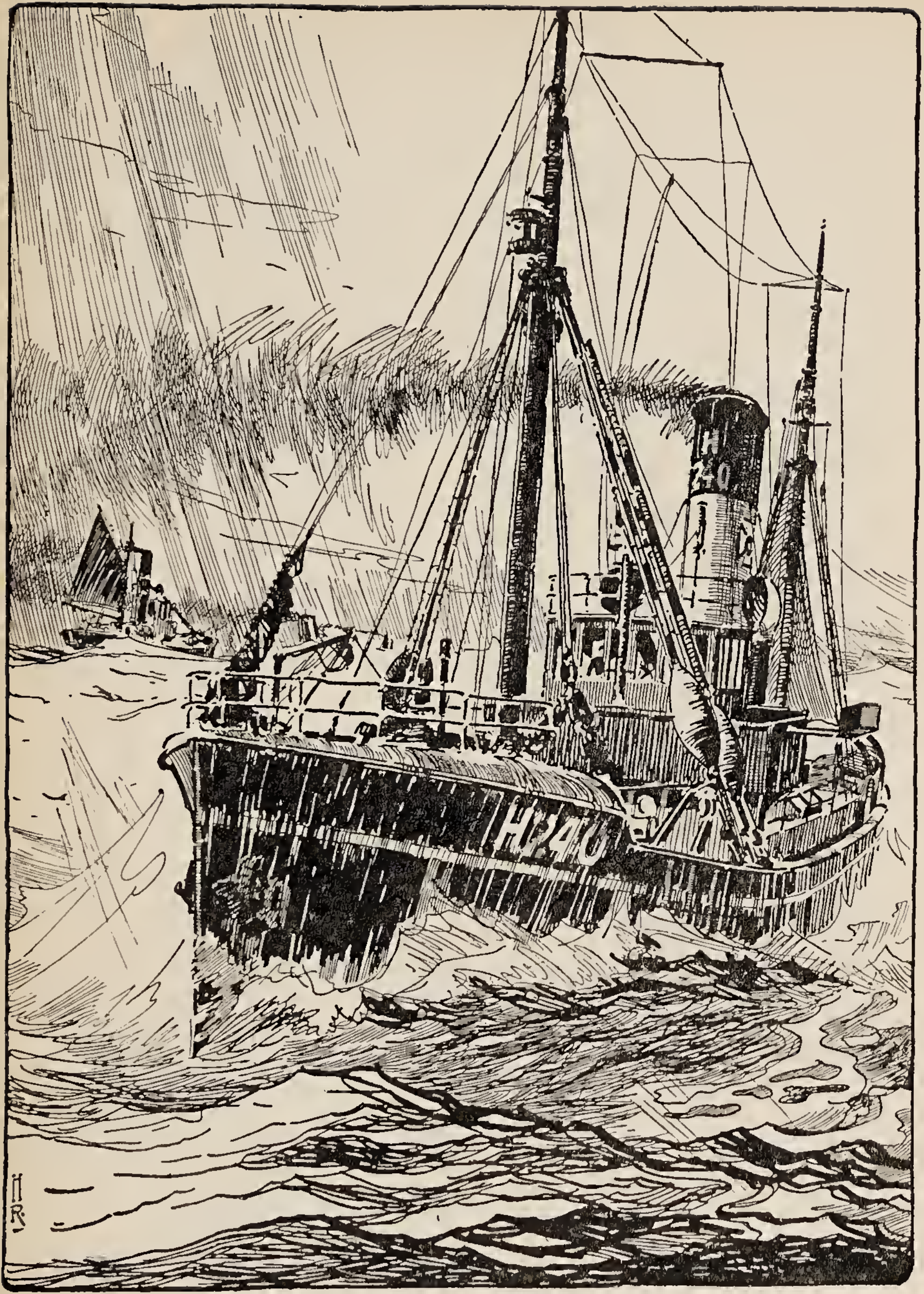
" Oh, fog mebbe, 'r p'r'aps he held her up at Belfast on th' chanst o' gettin' a few more scraps o' cargo. But he 's made a mull ov it this time.

Should 'a docked an hour or more afore this. He'll lose th' market if they don't hustle a bit at th' pierhead. . . . Say, Bill," hoppin' a bit closer to his mate, ". . . worn't this th' ship as you wos bos'un of in '94,—afore you come a-wing, I mean? "

" No! I never sailed in this'n, though I wisht I had a fat ham rind for every time I've settled up here on her! You're thinkin' o' Bill Bobbit, him as went out this mornin' t' fly west wi' th' *Mauretania.* Shouldn't be suprised t' see ol' Bill about. He says he soon gets tired o' them fancy French kickshaws they throws overboard out o' th' Cunarders. A hard case, that Bill! . . . 'mind th' time we wos —*Wee-aup*, what th'——"

The gulls go screaming, high, as a spurt of white steam throws up and *Talisman's* syren roars out a signal-blast.

" Now what th' whoop did th' old sinner do that for? " screams the indignant bos'un? " A dirty trick t' play on an old stiff like me. . . . Oh, yes! That's it, eh! Th' dockmaster shoutin' out like billy-oh, an' old Jimmy cantin' th' ship inshore. Blow me if he won't dock on th' tide after awl! "



FISHING CRAFT: A TRAWLER AND A DRIFTER

Plate 18

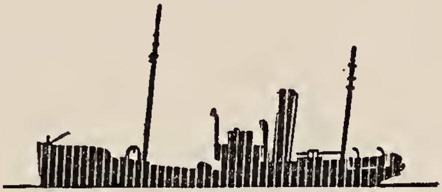
Chapter 10: *Fishing Craft*

WHEN an ocean voyage is drawing to an end and the passengers are busily employed in their preparations for disembarking, the lookout-man's bell rings out with unusual frequency. For some days past, a stroke at long intervals would bring every one to the rail to gaze out across the broad, windy floor at a distant ship; but now, in the populous waters of the channel approach, when the horizon is studded with vessels passing on their occasions, less heed is paid to the signal that another stranger has come up over the sea-line. Every one is busied with plans for arrival; shipboard acquaintanceship has to be strengthened against the parting on the Landing Stage; the near approach of the land recalls correspondence delayed or itineraries but vaguely projected. The activities of wireless communication with the shore being now much more pronounced, it is not to be wondered at that our travellers have only a mild interest in what is passing outboard the ship. And this is a pity, for they miss a sight that many would go far to see—a fisher fleet at work on the edge of soundings.

If I were concerned to observe the proper order in this book of ships, the description of the fisher-boat should come first, for, in the long line of maritime genealogy, she is the foremother from whom all vessels have come. The early seafarer did not seek trade on or over the sea. His business as a hunter called him out. The fine vessels engaged in fishing to-day are far removed from the shallops of early days, but the hunt is much the same—a wandering course over the waters to seek a profit in the depths.

While every tendency in modern steamships is to adopt and carry the ways of the land to sea, the fishermen are content to hold by their own peculiar sea ways and customs, and both they and their ships stand out as the most conservative class of seagoers. But this conservatism is not of a narrow or grudging nature. Than the fishing-boat, there is not a more friendly vessel afloat; the fisherman himself represents every fine, generous equality that is bred of daily contact with wind and sea. No one realizes his worth better than we, the deep-sea sailors, for we know the extent of our debt to him for magnificent war services.

The trawler is the largest and most powerful type of steamer engaged in fishing. She is able to go far abroad on her quest. Although the great majority of her class is employed on the crowded grounds of the North Sea, she is to be seen at work in lonely waters. From the chill waters of Iceland and the White Sea, through the Bay of Biscay, to the tepid streams around the coast of North Africa, she plies her trade, and the range of her operations is ever extending. War service took her to the western seaboard of the United States, and there her type has been firmly established to trawl the Grand Banks. Her tonnage varies from one hundred to four hundred tons. A length of one hundred and fifty feet is not uncommon, and many have the breadth of a young Cunarder. The trawler is an exceedingly compact and well-built vessel. One sturdy funnel is the rule, and its position, being nearer to the stern than to the bow, together with great sheer and a high bow, gives the little craft a "hard-weather trim"—an appearance of being able to stand up to any gale. And she does not belie her appearance. Her type is known as the finest "sea-boat" in the world, and there is not a doubt of her ability to ride out a heavy gale in which larger and more imposing vessels might have to "cut and run" for shelter. She has two masts that look somewhat heavier than her size warrants, but as steadying sail is often



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carried in heavy weather, their strength is needed. When at sea, a small sail is usually set on the main mast to hold her high bows up into the wind. Indeed, this sail is rarely lowered and may often be seen spread bravely on the little vessels when they are snugly moored in the fish dock.

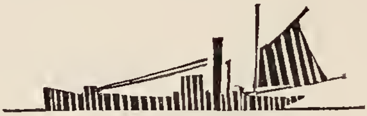
The peculiarly distinctive features of a trawler are the "gallows," by which her trawl is handled. There are two sets of these, one pair on each side. They resemble huge staples set at an angle above the bulwarks. Their purpose is to lead the heavy wire towing ropes of the trawl to the steam winch on deck. The trawl consists of a large net of conical bag shape, the average size being 100 feet in length and 80 feet across at the mouth. This huge bag, when set for fishing, is held outspread by means of two boards (called otters) fixed at an angle to the pull of the trawl warps or towing wires. When the vessel, with trawl astern, is steaming slowly ahead, the otters (acting precisely as does a kite in the air) shoot out in resistance and extend the large mouth: a ground wire of heavy substance serves to weigh down the lower lip of the net. For perhaps five hours the trawler tows this gear, generally against the set of the tide, and then all hands are turned out to the laborious task of hauling it aboard. To bring the head alongside is not difficult, the powerful steam winch doing this quickly, but the work of

" handing " the wet and heavy mesh of the net is strain enough for the small crew of seven or eight men. Great shouts and many a hearty pull together are needed before the closely-packed " cod end " (the pointed end of the net) appears above water. When this has been dragged over the bulwarks, the lashing that secures it is cast adrift, and the writhing and slithering mass of the catch is emptied on the deck.

In the North Sea and British waters, the trawlers work in fleets and do not themselves transport a catch into port, except on such occasions as may be necessary to replenish their fuel. The transport is done by specially swift carriers. These fine vessels are of the trawler type and largest size. Their industry in marketing the harvest of the sea that their smaller sisters have gathered is astonishing. We look upon them as the hardest-driven craft on the sea. In them, speed is rarely slackened, whatever the weather may be. Their " trade mark " is a trail of whirling black smoke, blown low on the water, and under this pall the swift carriers race in to the fish ports with " a bone in their teeth."

The long-voyage trawlers—Icelanders, North Capers, Biscaymen, Southers—carry their own fish into port. They have specially fitted tanks and a large supply of ice, and the fish are sorted and closely packed as the hauls are made.

Steam drifters are smaller than trawlers, but their outward appearance is much the same. They have no sets of " gallows " on their sides, as their system of fishing by means of flat nets does not require this heavy towage. Many of the drifters are built of wood, especially those of Scottish registry. In size, they vary from eighty to one hundred tons (although there are still some few of the older boats that measure no more than forty). An average length is about eighty feet, and in breadth they rarely exceed twenty feet—a beamy proportion for such a small boat, but needed for efficient handling of the nets. An outstanding feature of steam drifters is the foremast, which is so fitted as to permit of its being lowered while work at the nets is in progress. In this position, the mast lies at an acute angle to the deck of the boat, the upper pole resting in a crutch a-top the tiny wheelhouse. At sea, the drifter always has a scrap of sail set on the main mast, when lying to leeward of her nets: this keeps her steady in the wind and prevents any jerk or strain on the fishing gear.



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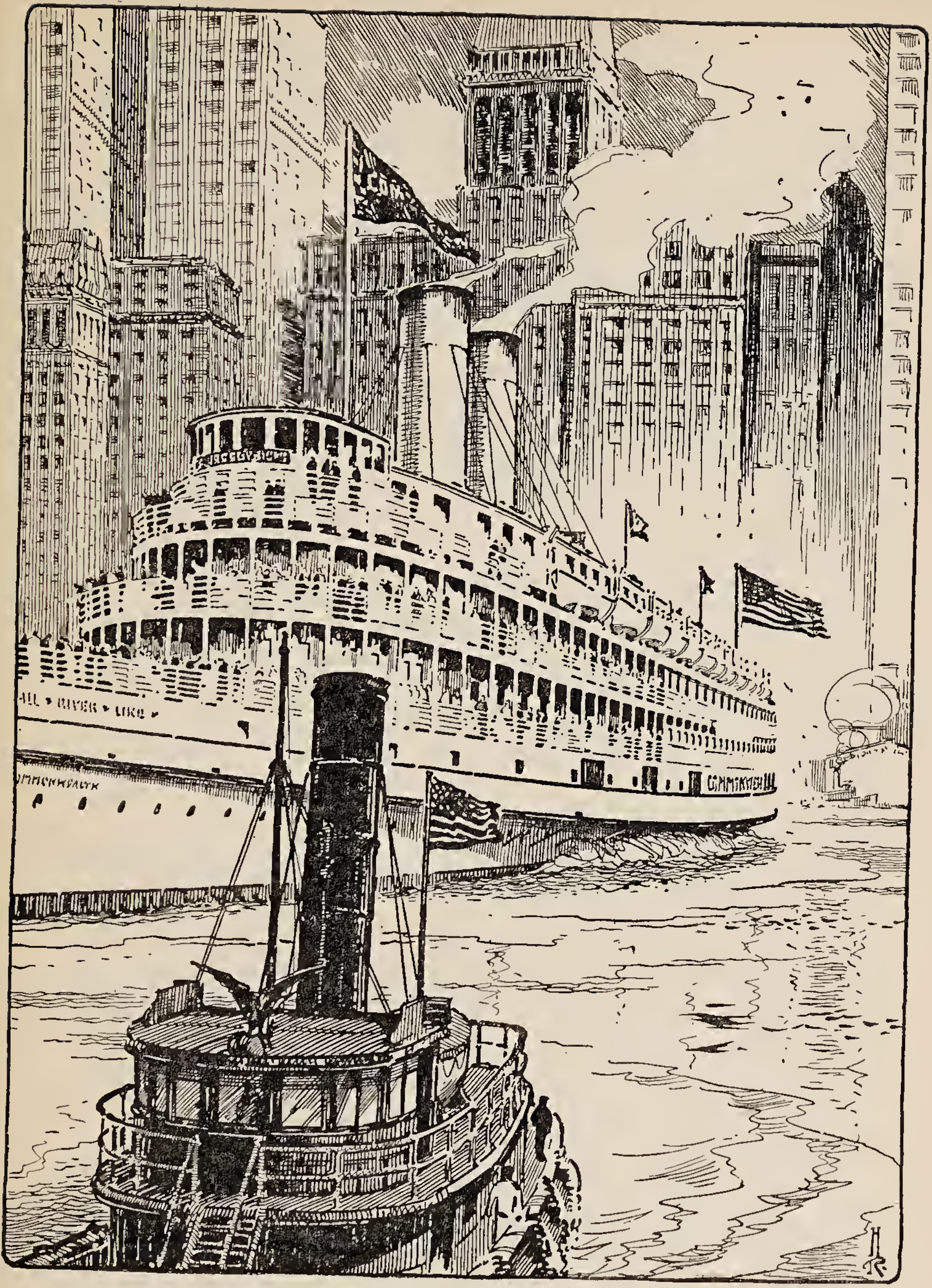
While the wide mouth of the trawl yawns for any fish that swim in its way, the nets of the drifter are set specially for shoal fish, such as mackerel, herring, and pilchard. A mesh for mackerel is one and a half inches from knot to knot: for herring, one inch; for pilchard, slightly less. A "fleet" of nets (a number, generally 100, of nets strung together) often extends over a mile or more of sea, and it is not always easy to distinguish the small bladder buoys that float the head of this lengthy "wall" under water. As the drifters work mostly at night and often in the track of shipping, this length in their nets is a source of anxiety to shipmasters, not because they need fear any danger to themselves, but on account of damage to the drifters' gear. Many of the drifters are owned by the men who sail in them, and the hazard of losing their gear is a serious consideration.

On the fishing grounds, the traffic of so many vessels in close touch with one another is productive of much argument and many quarrels. Collisions occur (but these rarely serious), nets are cut or damaged, trawls fouled, buoys set adrift. For recognition, most maritime nations insist on the marking of the fisher-boats, much in the way that wheel traffic is ticketed in a city street. British vessels are marked by large letters and numbers on the bow, sail, and funnel. The numbers are those of registration and the letters indicate the port to which the vessel belongs. Initial and final letters are used: thus, Y.H. (Yarmouth); L.T. (Lowestoft); C.N. (Campbeltown).

In matters of navigation, the fisherman's acquaintance with the higher art is, naturally, of no great depth, but in his own rough way he is certainly an efficient shipman and possesses an uncanny sense of direction in his local waters that deep-water sailors would have difficulty in acquiring. The "skipper" is always a very skilled tidesman, knowing the set and run of flood and ebb, and his confidence in this unique knowledge of the movement in channel waters is perhaps of more value to him than an intimacy with sextant and azimeter and chronometer. Of these expensive instruments he is often contemptuous. I asked an old Scots skipper how much use he made of his sextant in the grey atmosphere of the North Sea.

"Sextant?" . . . He pondered for a moment. "Whit time hiv I tae fiddle wi' a bit o' gless in ma 'ee! . . . I couldna mak' onything o' 't, an' gi'en it tae th' weans t' play wi'!"



AN AMERICAN EXCURSION STEAMER

Plate 19

Chapter 11: *Pleasure Steamers*

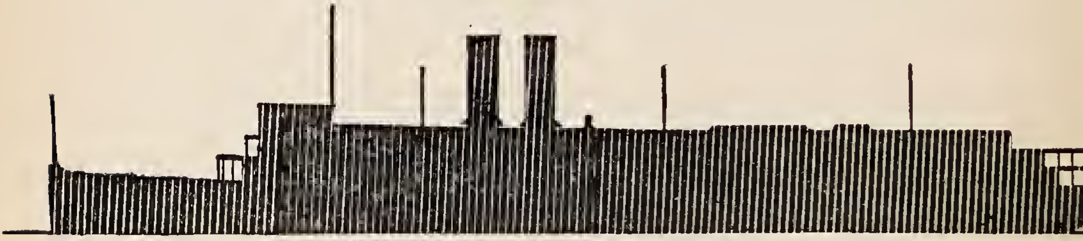
FASHION, as it is understood in dress and national costume, has its counterpart in the structure of ships, and, like dress, this variety in design—indicative of local and national character—is largely brought about by climate and the associations of the routes on which the vessels ply. This is perhaps most notably plain in connection with the steamers in which we go a-pleasuring. An we clothe ourselves suitably for the occasion, we are insistent that the craft in which we sail shall be no sober punt to dampen our day's enjoyment. We are much more critical when on holiday than when the demands of business present a time-table as the most important consideration of the journey. To meet the demands of excursion traffic, the holiday mood of travellers on pleasure bent, the scenic quality of the route, and the particular navigational requirements of the waters in which the vessel serves, the designer has many engagements. Weather, that is so much a consideration in pleasure-cruising, imposes the most clamant requisition. A service carried on under brilliant sunny skies requires awning decks and open accommodation: cooler climates call for sun-decks and no obstructing top-cover to hold out the warmth and sunlight. The prevalence of high winds and squally weather may make a low, stable hull necessary: shallows in river traffic, limiting the vessel's draught of water, frequently compel the designer to seek his accommodation in an expansion of breadth. Then again, the form of the steamer must embody certain well-defined and standard features that the vessel's owners would not willingly depart from.

In general, pleasure steamers can only be fairly considered as appropriate to their own waters. An American river or lake steamboat would be somewhat overdressed on Scottish lochs and estuaries with the frowning mist-clad hillsides standing dourly in appraisal, but with the high towers of Manhattan reared over her she stands out as an imposing vessel against that background of man's high achievement. Similarly, the lean, graceful hulls of the Clyde pleasure fleet would lose much of their beauty against the grim fluting of the Palisades, and the famous *Clacton Belle*—so beloved of Margate trippers—would be no more than a fly-boat on the wide yellow flood of the Mississippi. Happily, when we go on excursions, we do not take a Clyde flyer for Albany or a four-deck Hudson River steamer for Dunoon or Rothesay, so we are not often in a position to view such vessels in alien surroundings. They are at their best when serving the special requirements of their patrons, at home in their familiar routes.

The largest and (in matters of accommodation) most elaborate vessels of this class are the great excursion steamers on the Lakes and the American rivers and seaboard. Measuring as much as six thousand tons, these magnificent floating palaces are grouped in this chapter only by reason of their employment; by warrant of size and luxury of appointments, they could rightly claim to be included in the sections devoted to the liners.

In these great vessels, the special requirements of their patrons are notably of an ambitious character, but one would be fastidious and ill to please indeed who could find subject for complaint on board the *Commonwealth*, that plies between New York and Boston on a time schedule as rigid as that of the rail service and almost as closely adhered to, despite the handicap of fog and misty weather that is so prevalent on that coast. Verandah cafés, elaborate lounges with "period" furnishings, a dining-saloon that outglitters any brilliant up-town restaurant, and state-rooms that bear comparison with the best of transatlantic accommodation, are the features of this fine vessel. For those who wish to "take the land to sea with them" there are many longshore conveniences that include a barber's and hair-dresser's establishment, a manicure "parlour," stenographers' rooms, a telegraph office, and a dancing saloon.

The length of this vessel is four hundred and fifty-six feet and her breadth within the hull proper is fifty-five feet—but this great breadth is extended to about ninety-six feet by the huge paddle sponsons or guards. Viewed from ahead, this tremendous girth gives her a somewhat corpulent appearance, but she is redeemed from a heavy and cumbersome outline by her sheer, a well-proportioned slope of the main deck upon which her towering superstructures are imposed. Her speed is about twenty-two knots, and she possesses a valuable facility in manœuvre that no form of screw propulsion can equal. In the drag of her huge paddles, she has a backing power that is able to bring her to a stop within an amazingly short distance. For navigation of the crowded and often misty waters of Long Island Sound, I can conceive no better quality in a ship.



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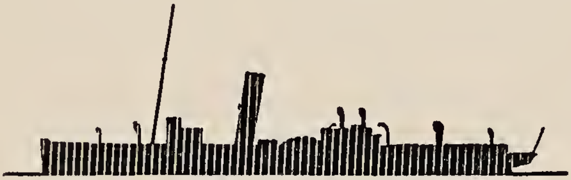
In *Fresh Fields,* John Burroughs wrote a charming description of his approach to the land and of the magnificent entry into the Firth and River of Clyde. After a protracted voyage from New York, in which old John would have sight of but few of his beloved birds, the near view of verdant headlands and "fresh fields" moved him to an expression of enthusiasm and keen delight. Very little escaped his notice. From the reek of the peats to the style of the fencing on riparian farms, he set down his impressions in amazing detail. But the wonder of it is that he said nothing of the busy pleasure fleet that plies on these waters; he had no word for the beautiful little paddle steamers that dart among the islands and the lochs and add a graceful and colourful note to the landscape that he admired so greatly. He had much to say of the shipyards lining the banks of the river (with a naïve astonishment at the tilled fields and pasture lands that alternate with stagings and the gaunt structures of ships in the making), but the river steamers, that are the outstanding illustrations of the history of steamships, impressed him not at all. Doubtless, he would be tired of his ship and of seafaring and would be longing for a firm footgrip of the land and a beginning to his famous and "desperate" chase of the nightingale.

Passenger traffic on the River and Firth of Clyde seems ever to have called for a large number of comparatively small steamers and not for a fleet, limited in numbers, of huge passenger-carriers. The character of local travellers is seen in this. While their demands, in point of luxurious appointments and contrasted with such longshore conveniences as the *Commonwealth's* manicurist and stenographers, may be modest and unambitious, they are insistent on a frequent and rapid service in their comings and goings. A keen observer (and the pity is that old John was so occupied with the fields and the birds) cannot fail to note that these steamers are rarely crowded. On morning or evening runs he would see four or five of them employed in transporting a number of passengers that could be accommodated comfortably in any one of the vessels. An efficiency expert might have reasonable grounds for criticism of such a generous provision of space in transport, but he would have a short hearing from travellers who see more in these graceful little vessels than mere conveyances and who would resent deeply any effort towards an economical "thinning." They represent, in their very presence on our pleasure grounds, no small part of the atmosphere that we welcome when in holiday mood. The River and the Firth would seem strange and alien without their familiar funnels appearing round the bends at the very tick of a scheduled time.

A CLYDE PLEASURE STEAMER

Plate 20

Although of no great tonnage, the Clyde pleasure steamer carries within her length of about two hundred and twenty feet and breadth of twenty-five to twenty-seven feet comfortable and adequate accommodation for her patrons. Being engaged on comparatively short passages there is no demand for sleeping quarters, and the space below decks and in the deck saloons is at the service of the passenger for rest and recreation. The appointments of the vessel are peculiarly shiplike. Fine polished woods that follow the sheer and camber of the hull and deckhouses are the usual features of the decorative scheme that has not altered greatly since Henry Bell, "having at much expense fitted up a handsome vessel to ply upon the river Clyde from Glasgow, to sail by the power of air, wind, and steam," set out his intention to employ the early *Comet*.



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There is much to please the eye in the outward appearance of any one of these exceedingly graceful ships. The lines of the hull are delicately modelled and—saving the keen, straight stem—resemble the clean, flowing contour of a steam yacht. The paddle-boxes and sponsons, that could so easily be made burdensome and awkward, are set upon her smooth sides like a close-fitting saddle upon a thoroughbred, and the rake of her uprights, in which funnel and mast and deck erections are so closely related that the eye cannot detect the influence of the sheer, has the trim quality that is associated with the vanished "square rigger."

Chapter 12: *Dredgers and Attendant Craft*

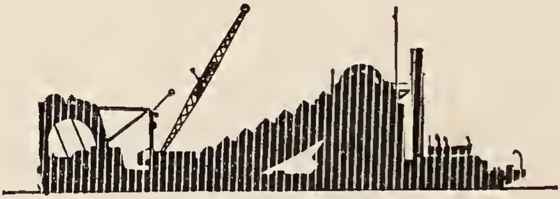
CURIOSITY is often aroused at sight of certain odd-looking vessels at work in the channels and estuaries leading to the great seaports. Their movements seem leisurely, deliberate, ponderous. At a distance, there is difficulty in recognizing them as steamships, for their outline resembles some engineering structure, such as a bridge or mammoth crane, in process of erection. The high thin funnels, that stand up from a mass of latticed deck erections, have that peculiarly industrial proportion that is associated with brick walls and galvanized roofing. As one approaches, the groan and whine of burdened machinery adds the appropriate note to their "industrial" character. Dredgers at work in the river or fairway are more interesting than sightly, and one would hesitate to draw attention to their presence in the seascape but for the wonderful services they render to their better-favoured sisters.

These "Cinderellas" of the seaports are amazingly industrious and efficient in our service. Without their tireless suction or scraping of the channel bottom, there would be no navigable passage for the greater ships. In most seaports, the influence of river or tide (or both combined) is to deliver a cargo of mud or sand in the deeps of the fairway. Every flood tide in the Mersey bears 100,000 tons of sand up stream. The ebb may carry the greater part of this to sea again, but a considerable quantity sinks in the slack hour of high water. If nothing were done to remove this silt, the whole port would be closed to deep-water traffic in less than a week! Certainly, the Mersey is abnormal, but its instance is chosen to show the tremendous natural forces with which the dredger has to contend in keeping the seaports open to deep-draught vessels.

The largest type of steamship employed in this great work is the suction pump dredger, a very handsome and imposing vessel of eight thousand six hundred tons gross measurement (a " Brobdingnagian Cinderella " indeed). She is four hundred and sixty-five feet in length and has a breadth of nearly seventy feet. In appearance she resembles an oil-tanker, the funnel and main engines and boilers being placed in the after-compartment. In this type of suction dredger, pipes of a diameter of nearly forty inches are lowered to the bottom of the channel and huge pumps are set in motion to draw the sand into the body of the vessel. She is able to fill herself with 10,000 tons of sand in fifty minutes! With this huge load, however, she requires the deep of the channel herself in order to proceed to the open sea to get rid of it, and so she is only able to work at favourable states of the tide. Her huge capacity was designed specially to meet this restriction in the hours of her employment. My reference to the dredger as being "more interesting than sightly" could hardly be applied to this unique type. She is a very trim and well-kept vessel and shows little outward sign of her navvying.

SUCTION DREDGER

A dredger proper is unlike any other vessel. The high triangular erection (the gantry) upon her deck, by means of which the buckets are emptied, is peculiar to her class alone. She "dredges" or drags the mud or slime—and often considerable pieces of rock or stone—from the channel bottom by means of an endless chain of huge steel buckets. These are set to a working level by lowering the arms or beams on which they travel to a position above the bed of the channel. When the gear is set in motion, the fortified lips of the buckets dig into the bottom and carry a portion to the surface. As they emerge from the water, the loaded buckets move in procession up the slope of the standing gantry and, tipping over on reaching the highest point, empty their contents into the capacious well of the ship. Such a "bucket dredger" at work gives an impression of ponderous, persistent effort.



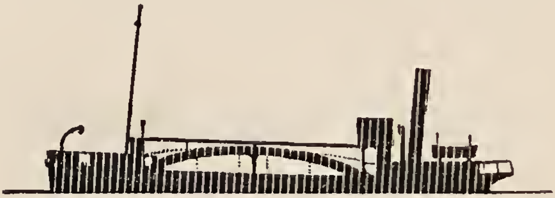
BUCKET DREDGER

The groan of the chain linking over the spurs of the driving wheels, the clank of the winches by which the vessel is warped from one position to another, the splash and rattle of dredgings pouring from the buckets, all are timed with a precision that matches the steady lap of the tides. There is a fascination in watching the unending rise and turn of bucket after bucket, each one emptying its load into the chute and then passing slowly under the framework of the sea-well to dip and dig again. One can have sympathy with the curiosity of the

Irish navvy who saw a dredger for the first time. “ Natt wan shtep will I move,” he said, “. . . *till I see th’ min that fills thim buckets!* ”

The older dredgers of this class carry their own dredgings out to sea and deposit the mud or silt in a position where there is depth and to spare, but the modern vessels cannot afford to have their costly dredging plant lying idle while they are on a passage to and from the dumping-ground. Mud-barges or “ hoppers ” have been constructed for this purpose, and the work of dredging a channel is now more quickly done. The “ hopper ” (there may be four or five in attendance on a hard-working parent ship) lies alongside the working dredger, and the load in the buckets is diverted to pour overside by way of a broad chute into the specially built hold of the “ hopper.” When she is fully loaded, and she loads very deep indeed, she backs out and proceeds to sea, while an empty sister barge steams alongside the dredger and begins to load.

Hoppers are busy little craft: they have an air of humble industrial life about them, dressed (as they usually are) in drab colours that do not give undue prominence to the mud-stains they carry. They vary largely in size, tonnage being governed by the nature of the channels they work in, but the outline presented is common to them all. A long hull that, when the vessel is loaded, appears very deeply set in the water, is characteristic of this type. She has one funnel and one mast, the funnel placed near the stern, the mast near the bow. All deck erections, including the working bridge, are placed at the ends, leaving the long space from bridge to forecastle for the hold or "well" in which the dredgings are carried. Above this well is the beam that distinguishes a hopper from all other harbour craft. This strong girder extends fore and aft in an upward arch like a bow under tension, and to it the heavy chains that open and close the hinged bottom of the well are led. When the loaded hopper reaches the "dumping ground" in open waters, the chains are slipped: the hinged bottom, opening outwards, allows the mud and silt to sink in deep water.



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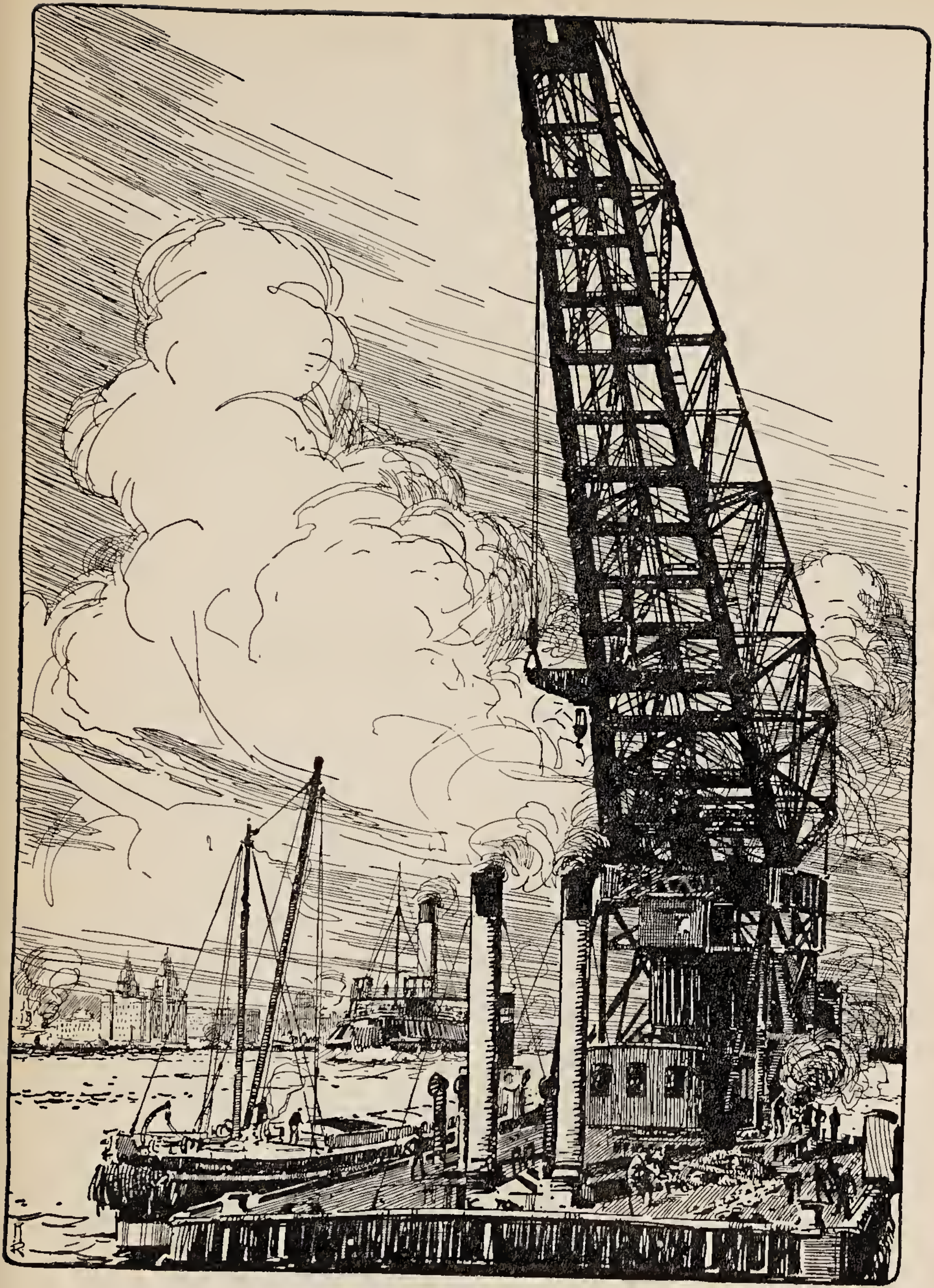
The crews of the dredgers are generally of a class apart from the run of sailormen. How they recruit them is a mystery to me. I have never seen a young man aboard, and I have never heard of an old sailor finding employment in these special craft.



A FLOATING CRANE AND HARBOUR CRAFT

Plate 21

Chapter 13: *Tugs and Port-service Vessels*

IN the early days of steam navigation, the wide application of the new power to ocean traffic was not at once foreseen. While it was doubtless visualized by a few enthusiasts, the general view seemed to be that steamships could only be used for work on the rivers or for short passages along the coast. The necessity for a supply of fuel to stoke the fires would limit their radius of operation (so they said) to a few sea miles away from the coal pits. This was particularly the view of the many interested in shipping affairs and having investments in sailing-ship property. Their great square-rigged ships, that required no other power than the unbought wind and the brawn of a few hard sailormen, would continue to adventure abroad: steam might be made a valuable assistant, but they did not consider it as a serious competitor. They saw only an opportunity for profitable employment of the new power in the river and the docks, and in towing the ocean voyagers into and out of port against contrary winds.

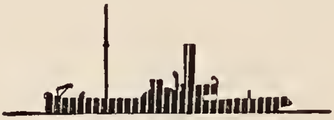
This view is now only worthy of recall in its bearing upon the quick but sturdy growth of the steam tug. Perhaps it explains why, at the time when other steamship types were slowly evolving from misty experiment, she had reached a point of efficiency and seaworthiness that is not very greatly improved upon to-day. But she had the luck of the first cast in these virgin waters. The early demand was for power to draw a load rather than force to propel a ship, and in this (the "accident" of a suitable underwater body being hers) she was spared the long years of experiment in ship design for steam propulsion. It is interesting to follow the line of her development. The efforts of the engineer being directed towards increasing the power of his engines, the form of the vessel in which that power was to be exerted was not a matter for his first consideration, as it would be to-day. Thus early, the acute difference between an above-water driving force (the sails) and an under-water propelling force (the paddles) was not clearly recognized. The builder was content to strengthen the existing hulls, or to build others on the same seaworthy lines that had come to him as a legacy from centuries of sailing-ship design. The result of this combination of a new power in an old form of hull was curiously successful in its application to the business of towage. Power, that could not be expressed in speed on account of the "full" and heavy structure of the hull, was not lost. It appeared in the strain of the tow-rope, the steady and impressive pull that could only be exerted through a stable hull holding well and deeply in the water.

For evidence of the seaworthy qualities of these early sea tugs, I need go no further than my study wall. On it I have a picture of the rescue of the survivors of the Liverpool ship *Lockwoods.* The inscription reads:—

"*This print, representing the Steam Tug 'Victoria,' Captain Eccles, taking off part of the Passengers and Crew from the Wreck of the Ship 'Lockwoods' in the morning of the 8th of January, 1839, in defiance of the fiercest gale that ever confronted the exertions of an intrepid and humane seaman and after the lifeboat had refused to proceed, is respectfully inscribed to the Directors of the Liverpool Steam Tug Company by their obedient servant, John Lynn.*"

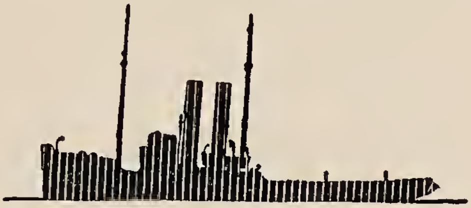
Judged by modern standards, the paddle tug *Victoria* (pictured in the act of backing under the stern of the wrecked *Lockwoods*) looks somewhat unhandy for perilous work. Her single tall and thin funnel, as high as her mast almost, would require a network of guys and struts to hold upright against the buffet of such a gale. The paddle-boxes, that are the only prominent structures on her bare decks, are unwieldy contrivances: one is driven deeply into the sea, the other is clawing uselessly in the spray and spindrift. But gallant Captain Eccles must have had confidence in her. She was efficient. She performed a very fine rescue "in defiance of the fiercest gale."

The *Aids* and *Powerfuls* and *Rattler*s that are our familiar harbour assistants to-day show no great departure from the main features of the sturdy *Victoria* of 1839. They are themselves fairly aged craft, as few paddle tugs have been constructed since 1900. The service required of a modern harbour tug is not so much an ability to tow, but rather a facility in manœuvre to check and guide a ship that is using her own steam power for a forward or backward movement. For this, few of the paddle tugs are as efficient as the short, high-powered screw tug. For some fine conservative reason, the Naval Authorities (who were so tardy in adopting steam towage) still employ the "paddler," and most naval ports possess fine examples of such excellent craft.



PADDLE TUG

Of screw tugs, the largest and most powerful are those employed in ocean towing, a very special class of seafaring that the Hollanders have made peculiarly their own. Britain, America, France, and Germany have seagoing tugs of equal power, but they do not specialize, as the Dutchmen do, in heavy long-distance work. The ocean tugs that hail from the Maas and Schelde are prepared to take charge of anything that can be taken over water and to tow it to any corner of the maritime world. They often store sufficient coal for the voyage on the vessel they are towing and go alongside of her from time to time to replenish their bunkers. They generally work in pairs, but I have seen no less than four employed in towing a huge floating dock to the Bermudas. Dismasted sailing ships brought home to refit, floating pontoon docks that stand up like great forts on the water, disabled steamships, oil barges, hulks, salvage tanks, are the burdens they draw astern from one ocean to another. Most pathetic of all their charges are obsolete warships and liners being towed across channel to the shipbreakers' yards on the Continent. The appear-



DUTCH OCEAN TUG

ance of these Dutch ocean tugs is somewhat deceptive. No one viewing them at a glance would recognize a tonnage of nearly four hundred tons in the compact and strongly-built but yet contracted hulls that house such a tremendous towing power. The illusion is largely sustained by the position in which their uprights are placed. The most efficient place for the towing-hook (on which the full weight of the towing hawser bears) is at a point amidships, nearly equidistant from bow and stern. To permit the hawser to swing clear, there can be no erections abaft the hook. Thus, their two funnels and two masts (the latter carrying the aerials of the wireless) are crowded together in the space of a very short bridge deck, while the after half of the ship is lean and bare of erections.

While the large American tugs do not often make long ocean voyages with a weight astern, they are frequently employed on considerable long-distance tows up and down the stormy seaboard from Hatteras to Maine and south into the Gulf. Others, on the west coast, make similar passages, notably from Puget Sound towing logs. They are fine vessels of about four hundred and thirty tons, with a length of over one hundred and forty feet. Their tows are generally barges, attached the one astern of the other in a long line that may extend for half a mile from the towing vessel. In this somewhat formidable array (almost a squadron in line head) they are a source of anxiety to single vessels steering on the transatlantic ocean tracks when fog, so prevalent on the coast, shuts down thick and clammy. Certainly, a tow is easily recognizable, for if there is one vessel abroad with an efficient steam whistle it is the American tug, but one has no means of judging the length of the tow. Patience is, more than ever, a virtue under these circumstances: it is best to bring up and wait until the *burr-r-r-r-aah-oop* of the tugman's syren dies out.

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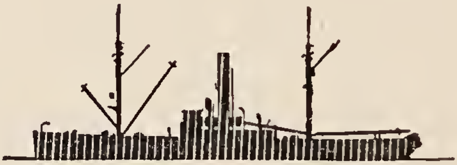
Considerably smaller, and having but one mast (and that abaft the funnel), the American harbour tug is an interesting type by reason of her aggressive methods of work. She does not often tow, although she can exert good power that way if put to it, but employs her strength in an equally efficient manner by placing her stem against the shell-plating of her charge and shoving with all her might. I am sure that, to ocean-weary passengers, there is no more interesting sight than a fleet of these small tugboats nosing into the side of a huge Atlantic liner and bearing her tremendous weight upstream against the ebb of the Hudson tide.

British tugs are of many shapes and sizes, each designed for a class of work that varies greatly in different ports. London tugs have river work to do, but they must also be able to manœuvre in the system of locks and docks that their customers frequent. They are consequently of a moderate size, but very nimble and quick-working in the congested passages of the docks. On the Mersey and in the Liverpool basins, the same conditions call for a handy type of towboat. There are plenty of these, bustling about at tide time as though there were fewer hours to the day in dockland than elsewhere, but the needs of the great liners in the river have brought a larger vessel into service, a passenger tender that is also a powerful tug as the occasion may demand. She is three hundred and ninety tons in measurement and has a length of one hundred and twenty-five feet. She can transport a great number of passengers. Her remarkable feature is the unusual (and somewhat awkward-looking) height of her upper bridge. This is so constructed as to allow of an "easy" gangway being placed from the comparatively low deck

PASSENGER TENDER

of the tender to the high side doors of the liner. A passenger tender of this type has a good turn of speed, but the impression of swift progress she makes when stemming the Mersey tide is greatly exaggerated by her low “ freeboard ” and the outthrow of broken water from her protecting “ rubber ”—a belt or ledge of iron-bound elm that extends along her sides to take the chafe and contact of other vessels and the piers. She makes a fine spectacle on the broad of the river when curving in towards the Landing Stage, her decks crowded with eager passengers and the “ house ” flag of her patron ship flying at the mast-head.

On a tidal river such as the Mersey, where the great docks are only accessible at certain states of the tide, the two, or perhaps three, hours that include the time of “ high water ” is the active period of the tide, and business on the river at this time is carried on in great haste. The dock-gates are open to the river, and traffic that has been penned behind the huge water-barriers for hours is set free to employ the brief term of “ tide-time ” to advantage. The first vessels to sheer into the river are the small craft, flats, barges, tugs, coaling transporters, ferries bound out to their stations with fuel enough for a day’s hard work, dock hoppers, with here and there an old sailing barge under dingy tanned canvas. The peculiar outline of a floating crane may attract attention as she steams out of dock with an array of mammoth boilers or machine parts stowed on her broad foredeck. She is a wonderful combination of an able steamship, an efficient carrier, and a notable weight-lifter. Measuring about six hundred and fifty tons, she has a speed of nine knots and can shift a weight of fifty tons, stowing it easily in the hold of a vessel whose deck height may be as great as her own funnel tips. Another vessel whose odd proportions stand out among the river craft is the salvage vessel of four hundred tons, that may be idly at her berth for weeks at a time and then suddenly put out to sea on a frantic errand with the foam of high speed rustling under her bows. She is one hundred and fifty-eight feet in length, thirty feet in breadth, and carries in her small holds an amazing assortment of " surgical appliances " for the swift and drastic treatment of wounded ships. Dynamite, compressed air, acetylene cutters and welders, motor pumps capable of " throwing " four to five hundred tons of water per hour, blocks


SALVAGE STEAMER

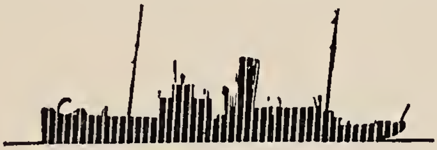
and tackle, timber baulks for patchwork, air cushions and pontoons, divers' gear, chemical fire apparatus, lifting gear and tools of every description are included in her salvage plant. The engines are able to exert a powerful towing strength on occasion, although towage is not her principal feature. She carries a large and highly trained crew, all specialists in some branch of "ship-surgery." In outward appearance, she is notable for two short but exceedingly thick masts that support derricks of great strength. Although she is, to us, a welcome ship on occasion, we are somewhat ashamed of close relations and acquaintanceship with her. She is only called to our assistance when we have met with disaster and are acutely conscious of some error of judgment that has brought us to the pass.

* * * * *

No one is accorded a greater attention when he enters on the stage of our affairs than the sea pilot who boards or leaves the ship at the bar. Not even wireless and express voyages with an accurate schedule of arrivals and departures have discounted the interest in his appearance. While the blue outline of the land that grows up over the sea-line and the presence of coastal and fishing craft may give an indication that the voyage is drawing to an end, the operation of embarking the pilot is the certain and tangible evidence that port is within hail. The lookoutman has the honour of the first signal. Recognizing a small vessel head that flies a very large flag at the foremast-head, he clangs the bell with a fine air of finality, and then perhaps revolves in his mind a matter of mental arithmetic in which wages at so much per calendar month may be trimmed to the odd days of the voyage.

The sighting of the pilot "cutter" ahead seems to arouse our ship and her people to an unwonted activity. Deep below, the telegraph bell sounds out in the engine-room, and the hiss and clatter of "stand-by" operations may be heard. The ensign is hoisted and the "jack" run up at the fore to show that a pilot is required; a hoist of four square flags (the ship's distinguishing signal) is displayed to ensure that we shall get a pilot qualified for our scale in tonnage. Anon, as we draw up to the pilot grounds, the steady throb of the engines slows to an unusual beat, a turn or two astern follows, and the ship brings up with the pilot vessel close aboard.

If the beautiful sailing pilot cutter has now vanished from the boarding grounds, she is a very handsome steam vessel, this quick-manœuvring little ship that lies-to under our bows and puts her boat in the water with a merry rattle of the block sheaves. So fine is she, we dignify her by the title of her predecessor. She is still the "cutter," although she relies on powerful steam engines and not on sail when keeping her station at the seaport entrances. She has fine qualities and represents a clever embodiment of many conflicting requirements. The demand for a vessel that can keep the sea in all weathers, that can manœuvre quickly and in small water space, that can house a large number of pilots, is made still more exacting by the limits of tonnage and draught of water imposed.



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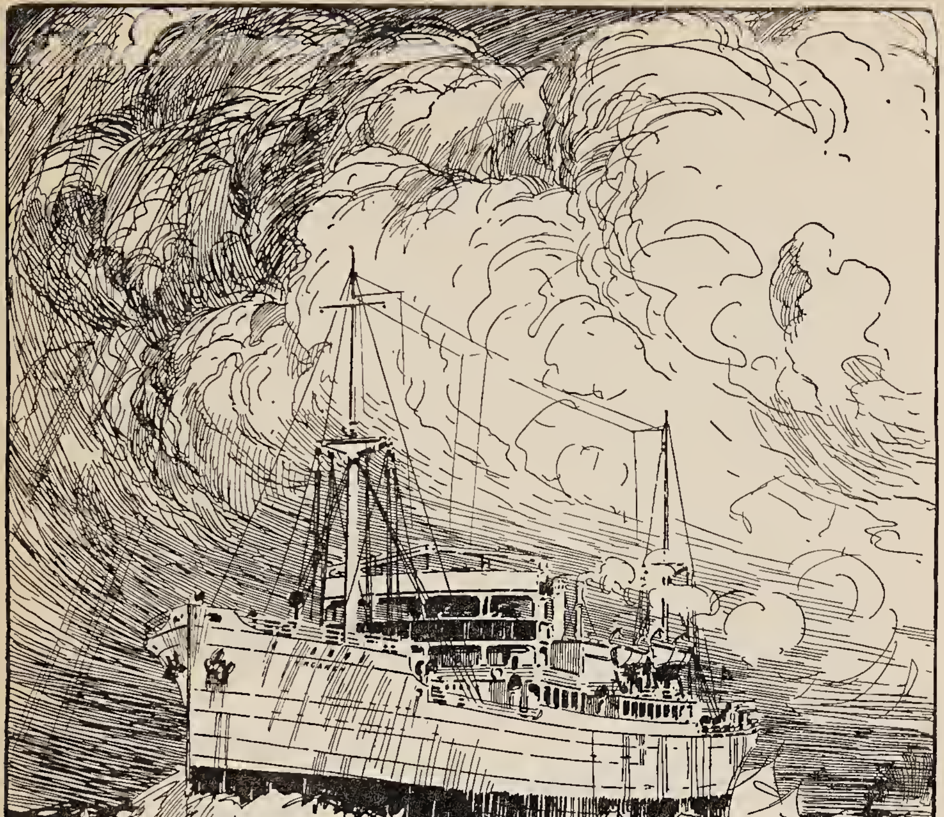
Economy in propulsion makes speed, so necessary to the "cutter" at times, a difficult quality to promote; pilots, like other seafarers, are no longer content with a barrack-like arrangement of sleeping-shelves; the restrictions of length and breadth (a typical "cutter" of this class is one hundred and forty-five feet long and twenty-eight feet in breadth) do not help the designer in his effort to meet all requirements. But he has successfully overcome his difficulties, and the pilot vessel stands out as one of the most beautiful and most efficient and hardest-working ships at sea.

While the embarking of a pilot at the last stage of the voyage is a notable incident, I always think that his departure, when the outward-bound ship reaches open water, is a more dramatic moment. Swaying, he goes down the long side-ladder to his boat. The promenade rails above him are crowded with row and row of interested passengers. The great ship, lying stopped for his convenience, leans over to him in the gentle ground-swell, perhaps throbbing at the funnel pipes as though impatient to get into her long ocean stride. The "give" of his small punt as he steps into it (he is usually a man of girth and stature) must seem perilously insecure after the stable planking of the big ship. He goes nimbly to his seat at the stern, a huge bundle of letters—the last regretful adieux of the passengers—is sent down by a hand-line, and he shoves off with a cheery wave. "G'd-bye, Captain!" he shouts. "A fine voyage to ye!"

As the great liner starts off on her passage, the quick-revolving propellers throw out a confused wash and race of broken water that causes the pilot's punt to dance heartily and a lap of spray to curvet over the stern-sheets where the pilot is seated with his bundle of letters on his knee. I often wonder if the recipient of a good-bye message ever glances at a salt stain on the envelope—a kiss for luck from the wave of the departing liner.



MOTOR SHIP

Plate 22

Chapter 14: "*Piping Down*"

MY first intimate view of a steamship was when I visited Hansen in the *Turret Belle.* But for my desire to see a former shipmate (who was Third Mate in her) I would not have gone on board, for there was little about the gaunt iron decks of this "tramp" steamer of 1893 to invite the interest of such as myself, a young apprentice serving indentures in square sail. I admit prejudice. In the half-deck where I had spent three years of my "time," one was considered a poor sailor who showed the least regard or sympathy for "steamboat" men. We could afford no shade of tolerance for those weaklings who preferred to "knock off the sea and go in steam." But still, an apprentice-mate must be visited, even in jail, so I stepped across.

The *Belle* was of the very early "turret" type, an ungainly and grotesque vessel measuring about three thousand tons. Even in a day when most cargo steamships presented immature and strange outlines, she stood out as the oddest creation of them all. In his effort to depart from the usual lines of a ship (possibly to emphasize an intolerance of convention) the designer seemed to have made her purposely forbidding in appearance. Saving the swollen round of her huge sides, there was not an honest curve or bend in her. Rigid angles met the eye everywhere; she seemed to have been hewn out of a solid rather than built plate by plate. I ventured on a deal plank, stretched precariously from the turn of her ugly whale-back to the copestone of the quay, and clambered aboard. The dockers had stopped work for the day and there was no one about the decks. The great hatchways, hastily and inadequately covered, roused a new feeling in me, a sense of insecurity in a ship, that made me step warily. The litter of cargo operations (that, in our old wind-jammer, would have been cleared and the ropes coiled down) lay as the workmen had left it and made slippery the narrow passages of the deck. I found no one to direct me and wandered round looking for the officers' quarters.

Accustomed to a sailing ship in which every door opened directly on to the deck, I was confused by the entries and passage-ways that led to the living-rooms of the *Belle*. Stepping into a recessed doorway, I looked down at the engines, and it was here that a vague mental questioning, that had troubled me since I boarded her, became distinct. I realized, suddenly, that she did not *smell* like a ship. There was no proper sea tang in the odour of oils and iron and coal-dust that prevailed. I missed the indefinable air of a clean-living ocean barque, the whiff of tar and cordage tinctured with faint essences of pine spars and woodwork.

Hansen had changed in the one year of his steamship experience. Certainly he was friendly and joyous enough at our meeting, but the old things (that used to be so near to him) did not seem to excite him greatly. When I set out to tell him of that big gale off the Plate—“ the time we split the fore tops’l an’ sprung th’ yard an’ th’ weather boats were stove in th’ chocks ”—he did not appear to be interested. His animation came with recital of all the ports he had been in since he left us, of great doings ashore at Genoa and New York and Bremerhaven. Then he had much to say about the new *Turret Whim* that was coming out in an East Coast shipyard. She was sixty feet longer than the *Belle;* there was a prospect that he would be promoted Second Mate in her; he would have his Mate’s certificate by that time: a command was not so far off, if he could only get his qualifying time in quickly enough. I had little to say. I felt that this steamship talk was ambitious, but perhaps there was a shade of envy in my reflections as I contrasted my prospects with those of my old shipmate whose feet were already well set on the ladder.

I was curious to learn how things were done in the *Belle.* What kind of “ work ” was done? How many knots could she go? Who set the jobs for the hands? What did they do on a voyage at sea with no sailorlike business to employ them? Hans was somewhat vague. "Oh! work and enough," he said. "We don't muck around with yards an' canvas, like you do in a crazy old wind-jammer, but there's plenty to do with cleanin' th' winches an' chippin' decks an' settin' out th' gear for th' next port." . . . "Like *you* do in a crazy old wind-jammer," was what he said, and I realized the gulf that lay between us.

When speaking of his own work, watch-keeping on the bridge at sea, Hansen became much more voluble and communicative. He was enthusiastic in praise of the system that ensured him eight hours' rest to four of duty. He was on deck from eight to twelve. There was plenty to do. While he had no immediate charge of the men on deck (the Mate looked after that), he was busy with navigation and other matters. Of course, he kept a good lookout; one had to alter the course from time to time to keep clear of other ships; there were "bearings" to be taken of the land; the steersman had to be watched; the speed of the ship was another matter for consideration. He showed me his navigation books. One was a record of the errors of the compass; columns of figures in a neat hand.

This was all very puzzling to me. To talk of the land as if it were always above the horizon! The steersman having to be watched, as though one could not tell when she was off her course by a squint at the sails—but no, of course there would be no sails! Then, this business of altering the course to keep clear of other ships. I had never thought of that. A strange sail on the horizon would be a day's event with us. The Captain would be on deck to see her: he and the Mate would talk for hours about the cut and set of her sails: the Second Mate (we carried no Third) would only have a look at her from over the pinrail as he went about his business of looking after the seamen at work. A compass book? Of course, I knew that such records were kept, but had thought that that was the affair of the Captain or perhaps the Mate. With us, the Second Mate held no high official position. He was but slightly senior to the carpenter or the steward. While the Captain would address the Mate as Mr. Stainger, he would never use the Second Mate's surname. " Mister " was the word: it was not considered good for the Captain to remember a name. That the " Mister " of the *Turret Belle* should himself alter the course, watch the steersman, assist in the mysteries of navigation, and keep the compass records, struck me as odd, but I was to have a further revelation of the strange order of things in steamships.

As we sat talking, some one called from the deck above and Hansen went out. He returned accompanied by a pleasant-faced young man not much older than himself. I was prepared to meet the Mate, but this was the Captain, and it was not without some embarrassment that I returned his friendly nod. There was some talk about charts, and Hansen produced another book in which the names and numbers of the charts on board were entered. A point was settled, and the two then fell to talking of music halls and comedians and programmes. I felt very ill at ease. There was Hans (who but a year ago would jump at every bull-roar from the poop) lounging against the polished boarding of his bunk—and there, the young "old man" of the *Turret Belle* talking to him as though to an intimate friend. For me, the structure of seniority that I had thought so solidly established seemed to crumble in that little six-foot cabin while these two talked of Empires and Alhambras!

I had much to ponder on my way back to my old ship. I reviewed all Hansen's vaunts and advices: "That one was completely out of the world in an old wind-jammer; that he had been into more ports in a month than I had visited in years: that there was fresh food and plenty of it in a steamer, while we had hard tack and salt horse for our fare. Who but a fool, he asked, would stand for watch and watch—four hours on and four hours off duty? . . . I could see for myself what a fine job he had! For the very life of him, he couldn't see how anyone would ever look sideways at a rotten old barge of a sailing ship that could hardly get out of her own way! "

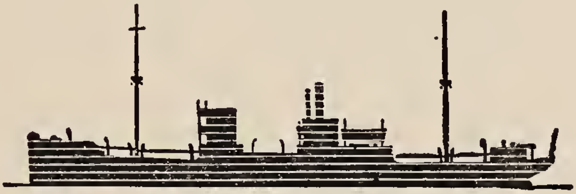
Naturally, I was shocked to hear my old shipmate talking in this way of a real ship, but there was much in his argument that could not be dismissed as idle abuse of old times. Who but a fool, he said? Perhaps! But I thought of joys of action in high winds, compared that operation of turning a telegraph handle, and recalled the business of the compass book and the charts that was no proper sailor-work for a " Mister." Still, one would be blind indeed to ignore the trend of seafaring. There were (in 1893) plenty of sailing ships, but it required no extreme of vision to see approaching the years when they would be only a memory. So, this *Turret Belle* and her kind were to be the ships of the future! . . . I was vaguely depressed at the thought of it. . . . She did not smell like a ship!

* * * * *

The years are swift. Quite lately, I had an opportunity to inspect a new motor ship. She was built for Swedish owners, and I was informed that Scandinavians generally were much more keenly interested in this new form of ship propulsion than were their British or American cousins. To me, there was a significant point in this, for I recalled that

Scandinavian owners were somewhat slow to realize the value of steamers and were in fact the last to abandon square sail. Having a magnificent body of skilled seamen, they were reluctant to adopt a way of seafaring in which the hardily acquired resources of their men could not adequately be utilized; as a consequence, they lost heavily in the swift transition from sail to steam. But it is evident that the coming revolution in ship propulsion will not find them again in the rear. They are placing orders for motor-ship tonnage with a courage that deserves reward.

This new ship, a vessel of about five thousand tons, was noteworthy as being the first *single*-screw vessel of her class, and her presence at the loading-berth was, to me, convincing evidence that the period of trial and experiment in motor-ship design was no longer one of tentative effort, but had reached a definite stage of service in which she was proved to be not less reliable than the steamship. Earlier motor ships, having twin or triple screws, were fitted with a plural installation as an insurance against total disablement in the event of a breakdown at sea, much in the same way that the early steamship carried her spars and sails as a "stand-by." It was considered unlikely that both or all three motors would fail at the one time. In the *Yngaren,* no such provision was deemed necessary by her confident builders and owners, and the successful outcome of a long maiden voyage justified their faith. To " motor " a total distance (and in all weathers) of over twenty-eight thousand miles without a serious and forced stoppage equals any performance of a steamship. When one reflects that she is able to transport a larger cargo than any steamship of her dimensions (and that at a notably economical fuel consumption) there need be no question that a revolution in seafaring is close at hand.



22.

When I boarded her, I knew her at once as a ship of the future. I had experience. I knew the signs. I realized that she did not *smell* like a ship. There was no proper sea tang in the faint odour of volatile fuel oil that prevailed. I missed the indefinable air of a hard-driven ocean steamship, the whiff of heated engine oils and the honest odour of coal-dust!

Glossary of Words and Phrases

Abaft. Behind or towards the stern.

Abeam. When used in reference to an object in sight it indicates a position on the broadside of the sighting vessel, nearly at a right-angle to the line of that vessel's keel.

Adrift. To take, To loosen or unravel.

Aerials. Wireless, Thin wires, usually of copper, stretched between the masts to conduct the sound waves to the receiving apparatus and similarly to transmit a wireless message to the ether.

Ahead. In front or towards the bow of a ship.

Astern. Immediately behind or towards the stern: in the wake of a ship.

Ballast. Weight, not being cargo, placed in a vessel's holds, to give her stability.

Ballast. Water, Most modern vessels are built with a double bottom or skin. The space between the outer and inner bottom plating is constructed in the form of tanks in which water is carried as ballast.

Baulks. Timber, Heavy pieces of timber, generally squared, used as props or shores.

Bearing. The direction of an object from the ship. It may be indicated relatively to the line of the keel of the sighting vessel, or as read from the compass.

Belay. To, To secure or make fast.

Bells. Time at sea is expressed in "bells": these are the distinctive notes rung on a ship's bell every half-hour.

Bell-boat or Bell-buoy. A floating vessel moored in channels as a guide mark: usually indicates a position at which course must be altered in order to keep within the fairway. It has an erection upon which a bell is mounted, and this is rung by the action of the sea.

Bell-lanyard. A piece of rope, usually ornamental, attached to the clapper of a bell, and used in striking a note.

Berth. A position.

Berth. Loading, A position at the dockside where a vessel may be loaded.

Bilges. Drainage wells at the sides of the double-bottom tanks.

Bower. Anchor. The principal or bow anchor of the ship.

Bulwarks. The upright plating at the sides of the ship above the hull proper, and enclosing the decks.

Bunkers. Compartments in which fuel for the ship's use is carried: the term is also applied to that fuel.

Butts. The upright ends of a length of plating; the ends of a deck-plank; the joint connecting the ends of two plates, or two deck-planks, together.

Camber. A vessel's decks, being higher at the fore-and-aft centre line than at the sides, are said to be cambered.

Cant. To, To turn a vessel round.

Cape. The, Sailors term the Cape of Good Hope "the Cape."

Capstan. A machine on deck for heaving in ropes or for raising the anchors.

Chain-slings. Strong lengths of chain used for binding a number of packages of cargo together in the operations of loading or unloading.

Chanteyman (pronounced Shanteyman). The soloist in the singing of a sailor's hauling song or "chantey."

Chute. An inclined board or plate, down which goods or solid matter may slide.

Clipper Ship. Now accepted as a term for a square-rigged sailing ship.

Coir Yarn. Yarns of coco-nut fibre, usually made up in tightly compressed bundles, or "dholls."

Compass Gyro (Gyroscopic). An instrument which points to the true north by the action of a fast-spinning wheel, when mounted under certain conditions.

Conn, To. To direct.

Consignee. The person to whom goods are to be delivered.

Consignment. A lading of goods. Generally applied to a particular parcel or amount in which one firm is interested.

Counter. The extension of a vessel's stern which overhangs the water. Also applied to the rounding of the plates leading up to this position.

Crow's-nest. A circular platform on the foremast, generally high up, from which a lookout is kept.

"Cut and Run." To, A reference to a perilous position of a ship in which there is no alternative but to cut the anchor cable and set sail in an effort to prevent being driven ashore.

Cutwater. The foremost edge of a vessel's bow, at which point the bow enters the water.

Deadweight. Total weight or heaviness as measured by a balance.

Direction-finders. Wireless instruments used to determine, by ether waves, the direction from whence a wireless note is coming.

Displacement. The weight of the amount of water displaced by the immersion of a ship.

Double Bottom. See Ballast, Water.

Downstream. The direction in which the water of a non-tidal river flows. Often used to indicate a direction towards the sea.

Draught. The immersion of a ship, generally measured on a vertical scale of linear measurement.

Draught. Deep, The immersion of a ship when loaded.

Draught. Light, The immersion of a ship when partially loaded or in ballast.

Entrance. A general term for the fore-part of a ship, or that portion of the hull that "enters" or cleaves the water.

Fairway. A buoyed channel or any other navigable waters in which a vessel must steer a definite and undeviating course to avoid going aground.

Figurehead. A carved figure placed on the extremity of the stem of a ship: usually emblematic of the vessel.

FLARE. The upward and outward curve of the bows. (Not to be confused with the upward and outward curve of the *stem.*)

FLOOD. A contraction of "flood tide."

FORECASTLE-HEAD. The built-up structure at the fore-part of a ship.

FREEBOARD. The distance between the surface of the water and a mark placed on the ship's side level with the main deck.

FREIGHT. Money paid for the sea carriage of goods. This term is frequently used (erroneously in my opinion) to denote the goods or cargo in general.

GALLOWS. Erections built above the bulwarks of trawlers to facilitate the handling of the trawl.

GANTRIES. Parallel erections above the deck of a cargo vessel, used in operations of loading and discharging cargo.

GROUNDNUTS. Peanuts.

GROUND-SWELL. A sullen and long even swell in the sea to be met with at the mouth of an estuary.

GUNNIES. A coarse variety of sacking.

GUN-PORTS. Embrasures in the sides of certain warships, now obsolete, through which the guns were trained.

HALYARD or HALLIARD. Rope used in hoisting sails and yards.

HAMMER. Chipping, A double-headed hand hammer with faces resembling blunted chisels, used for clearing rust from ironwork.

HAND. To, To manipulate.

HOIST. A, A number of flags representing a word or sentence in any Code of signals.

HYDROPHONE. An instrument for sending and receiving sound under water.

INBOARD. Within the ship.

"JACK." The British Union Jack with a white border. Used as a signal that the vessel displaying it requires a pilot.

KNOTS. A measure of speed. Often erroneously used to denote a *nautical* mile of 6,080 feet as opposed to a *statute or land* mile of 5,280 feet.

LAND. To close the, To approach or keep close to the land.

LAND. To make the, To come within sight of the land after an open sea voyage.

LANDING. The exposed horizontal edge of a length of plating on a vessel's hull. The overlap of the lengthwise, or longitudinal, edges of two plates.

Lean. The angle at which a sailing vessel heels over when under wind pressure.

Leeuwin, The, A sailor term for Cape Leeuwin on the south-west coast of Australia.

Leeward. The side of a ship that is away from the wind.

Lightship. A vessel moored in a position as a navigational mark and exhibiting a powerful light for guidance during dark hours.

Lines. The contours of a ship. "Fine lines" are delicate and flowing. "Full" lines are heavy and abrupt.

List. The angle or deviation from the upright at which a vessel may lie.

Load. Deck, Cargo, generally timber or goods that cannot be easily stowed in the holds, carried on the deck of a ship.

Lock in. To, Certain docks are only accessible at a high state of the tide. In these, basins of smaller size are constructed in order that vessels may not be detained until the tide serves. The basins have water-gates at each end, and vessels may be admitted or be passed out without altering the level of the water in the large dock to any serious extent. A vessel entering dock in these circumstances is said to "lock in."

MASTS. Twin, Two masts, placed abreast in a ship. A useful but somewhat unsightly disposition.

MATS. Cargo, Plaited mats, generally of swathes of bamboo, placed between packages of cargo to prevent chafing and damage.

MOLE. A stone breakwater or sea wall. Usually one having facilities for the placing of vessels alongside to load or discharge cargo.

MONSOON. A periodic wind in eastern seas. The term is generally applied to the sou'west monsoon in the Indian Ocean, in which long-continued winds of great violence are experienced.

MOULDING. An ornamental ledge, generally of wood and rounded at the edges, imposed lengthwise on the upper plating of a ship's hull. Usually painted in some contrasting colour to emphasize the sheer of the vessel.

"NOTE A PROTEST." To, A shipmaster on arrival in port is required to make a statement regarding the weather or any untoward occurrence during the course of the voyage. This is done in order to facilitate the adjustment of claims for damage to ship or cargo of which he might not at the time be aware. This duty is termed "noting a Protest."

Off-shore. In a direction away from the land.

Pay Off. To, At the conclusion of a voyage the crew of a vessel receive their wages and are thus "paid off."

"Pipe Down." To, When some duty or "job o' work" on board ship is completed, the men are dismissed at the command "pipe down." In some merchant ships, the bos'un's pipe, to which this phrase is a reference, is still used.

Plates. Stokehold, The footplates of the boiler-room or stokehold upon which the firemen stand when attending to the fires.

Plimsoll Mark. A mark cut in upon the sides of a vessel to indicate the extent to which her hull may be immersed when loaded.

Port. The left-hand side of a vessel when one is facing the bow.

Ports. Coaling, Openings in a vessel's side through which coal may be passed into the bunkers; secured, when the vessel is at sea, by heavy plates or doors.

Posts. Samson, Upright posts used to give the necessary hoist to a derrick (cargo crane) when a vessel's masts are not available for the purpose.

PUNT. A very small boat. Frequently used as a term of derision.

RAKE. The angle at which a mast or other upright is set into the deck of a ship.

REACH. A, A stretch or part of a river in which there is no considerable bend.

RETARDATION. The loss of speed due to the frictional resistance of sea water upon the hull of a ship when under way.

RIG. The form or particular fashion of a vessel's masts and spars.

RIDE OUT. To, To keep or hold in position against the violence of a storm.

RUBBER, or RUBBING STRAKE. A thick stringpiece of hard wood secured to the side of a vessel to prevent damage to the plating by the contact of any outside body.

RULE OF THE ROAD AT SEA. International rules adopted by all maritime nations for preventing collisions at sea.

RUN. The, The sweep of the underpart of a ship at the stern.

"SAILING CLOSE TO THE WIND." Colloquially, a term to express a keen pursuit; making good progress; swiftly approaching a point in fact or argument.

Scroll-work. Artistic designs for decorative purposes.

Sea-boat. A strong and seaworthy vessel in heavy weather conditions.

Sea-kindly. A vessel that moves with an easy motion in heavy weather is "sea-kindly."

Sea Room. Open sea space in which a vessel can be manœuvred readily.

Seaway. Applied to heavy seas in the open.

Sheer. The fore-and-aft curvature of the deck-line of a vessel. The depression of the middle of the ship below the ends.

Sheer Ribbon. A moulding or painted ribbon on the side of a vessel at a position in which the sheer is most manifest, generally following the curve of the deck-line itself.

Sheer-strake. That strake (or series of lengths of plating) that comes immediately below the strength deck of a ship.

Sheet. A rope attached to the lower corners of a square sail, and to the leeward corner of a fore-and-aft sail. The sheet is the working assistant in holding a sail outspread to the pressure of the wind.

Slip. A, A small dock, or an inclined platform on which small vessels or boats may be hauled up from the water.

SOUNDING MACHINE. A machine consisting of a drum upon which many fathoms of fine wire are wound, and used to determine the depth of water at sea. Attached to the loose end of the wire is a deep-sea lead.

SPINDRIFT. Fine spray.

SPONSONS. The staging between the paddle boxes and the side of the hull.

STABILITY. The quality in a vessel of remaining upright against adverse conditions, or her energy to return to an upright position when heeled over.

STABILITY INDICATORS. Instruments used to determine the stability of a vessel under the varying conditions of her loading.

"STAND-BY." To, To attend. To await instructions.

STARBOARD. The right-hand side of a vessel when one is facing the bow.

STARBOARD-HAND BUOYS. The conical buoys upon the right-hand side of a ship when entering a channel leading to harbour.

STATE-ROOM. Rooms in passenger accommodation reserved to the use of the individual passenger.

STEAM: "Open Roadstead Steam." When a vessel is anchored in an open position off a coast or harbour, she is said to be in an "open roadstead." Under these circumstances, it is prudent to maintain sufficient steam in the boilers to move the ship in an emergency. This condition is termed "having open roadstead steam on the ship."

STEM. The foremost upright in a vessel's hull. The extreme fore-end.

STERN-SHEETS. A term now generally applied to the seat at the after-end of a small boat.

STEVEDORES. Skilled workmen employed to stow (or pack) cargo in a ship. The term is now indifferently applied to all the men engaged in loading and discharging cargo. Dockers. Longshoremen.

STRAKE. A modern ship's hull is outwardly built up of fore-and-aft lengths of plating. The series of plates comprised in one extended length from bow to stern is termed a strake.

"SWING SHIP." To, To turn the ship.

TARPAULIN. A canvas cover of tarred or other waterproofed material.

TAUT. Tight.

TELEGRAPH: Ship Telegraph. A signalling instrument used to convey orders from one position in the ship to another. Principally, the one used to convey working orders from the navigating bridge to the engine-room.

THROTTLE VALVES. Valves admitting steam to the engines, and so constructed that an immediate or "throttling" control is exerted.

TIDE: "Top of the Tide." That period of a tide at which it has reached its highest mark. Applied to the short period of slack water between flood and ebb.

TIDE: "The tide has made." A colloquialism meaning that the flood tide has ceased running, having reached its highest point.

TIDE TIME. The period of the time when traffic, taking advantage of its state, is at its busiest upon the river.

TIDE WORK. Work that is dependent upon certain states of the tide.

TOLL SCHEDULES. The table of dues and payments for the use of docks, canals, and other seaport properties.

TOP-HAMPER. Excessively heavy upper spars or deckworks in a ship.

TOP-WORKS. The deckhouses and other erections superimposed upon the hull of a vessel.

TRIM: Hardweather Trim. A condition of being well prepared for heavy weather.

UNSTAYED. Not properly supported.

WAY. Propelled movement of a vessel in the sea.

WAY: "GETTING UNDER WAY." A term meaning "to begin" an operation.

WOOD: Dunnage wood. Pieces of wood of varying shapes and sizes used in the compact stowage of cargo.

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